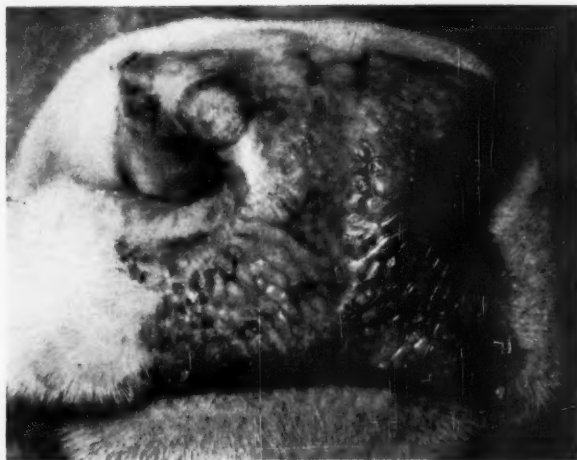


Journal

OF THE
**AMERICAN VETERINARY
MEDICAL ASSOCIATION**



Bovine Papular Stomatitis—Recognition of this viral calfhood disease in the United States is reported for the first time. Its similarity to foot-and-mouth disease emphasizes importance of accurate diagnosis.

Page 404



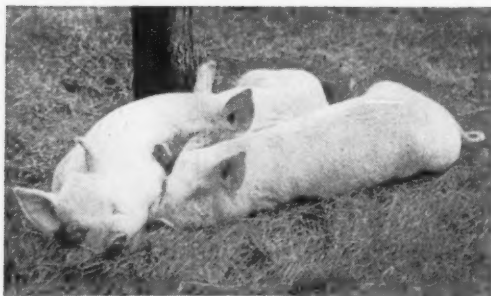
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October 1, 1960

No. 7

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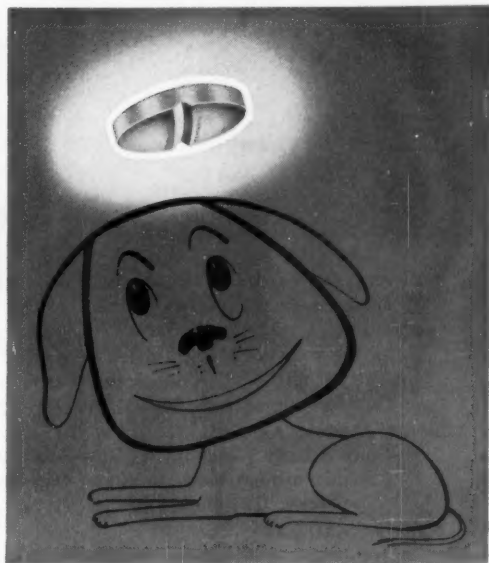
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Journal

OF THE
AMERICAN VETERINARY
MEDICAL ASSOCIATION

Vol. 137

No. 7

Oct. 1, 1960

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Correspondence

July 25, 1960

Gentlemen:

Enjoyed the "veterinary" versus "veterinarian" editorial. The local fire chief registered me as a voter the other day and came up with the compromise shown on the enclosed stub (vetinarin).

Yours very truly,

s/ROBERT M. MILLER, D.V.M.
Thousand Oaks, Calif.

July 28, 1960

Dear Sir:

I have read with interest your editorial "Veterinaries or Veterinarians?" which appeared in the July 15 JOURNAL.

I, too, have challenged nonveterinarians on the use of "veterinary" as a noun, and have lost to "Webster's New International Dictionary."

I think that your editorial is an intelligent discussion of the controversy and that your closing paragraph was particularly appropriate.

Very truly yours,

s/ROBERT J. BYRNE, D.V.M.
College Park, Md.



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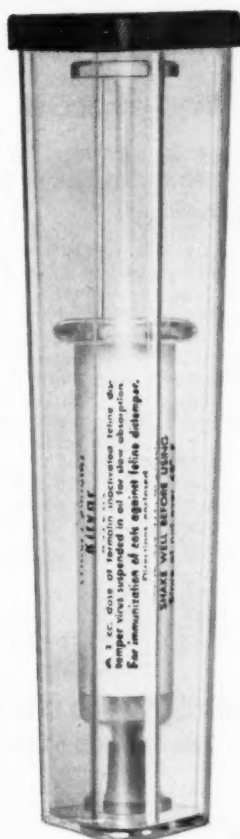
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FROM THE AVMA WASHINGTON OFFICE


J. A. McCallam, VMD
Brig. Gen. USA (Ret.)

The following bills have been cleared for Presidential action:

- | | |
|---|---|
| PHS Act | H. R. 6871, amends title 111 PHS Act to authorize grants for graduate training in public health. |
| Research Grants | H. R. 10341, authorizes grants-in-aid to universities, hospitals, laboratories, and other public or nonprofit institutions to strengthen programs in research and research training in sciences related to health. <i>NOTE:</i> — This measure gives Surgeon General authority to make grants for the general support of research programs of institutions as well as to support specific projects proposed by individual applicants. |
| Hall of Fame | H. R. 5789, to incorporate the Agricultural Hall of Fame. |
| HEW Appropriations | H. R. 11390, Dept. of HEW Appropriations Fiscal 1961, total \$3,784,159,631. Includes for PHS \$1,029,544,000 of which \$560,000,000 earmarked for National Institutes of Health. Food and Drug got \$16,952,000. |
| Social Security Amendments | H. R. 12580, Social Security Amendments of 1960. This is a compromise version following adoption of conference committee report of the two Houses (House Report No. 2165). Conforms fundamentally to medical care provisions reported out by Senate Finance Committee (see JOURNAL Sept. 15, 1960, adv. p. 12). Also increases amount outside earnings a retired person can receive to about \$1,350 without losing any part of social security retirement benefits (previously \$1,200.) |
| Voluntary Pension Plan Not Considered | H. R. 10, voluntary pension plans for self-employed was not called up for debate or vote prior to adjournment, although among measures placed on Senate Legislative Calendar Aug. 29, that might be considered. |
| Pesticide Bill Meets Objection MISCELLANEOUS | Consideration of pesticide chemical mass biological controls bill, H. R. 12419, was objected to when called up in House Aug. 30. |
| Army Will Draft Veterinarians | Selective Service survey of all veterinarians under age 26 who are non-fathers being made by local draft boards. Since sufficient draft-vulnerable veterinarians have not applied for a commission and active duty to meet the Army's needs, the only recourse will be to order for induction the number required (see JOURNAL Sept. 1, 1960, adv. p. 6) |

(Continued on adv. p. 12)

Let's take the bull by the horns



Did you ever try to outrun a bull? Most of us have—at one time or another. And while the chase is fun, the consequences are bad if we don't succeed.

Right now, figuratively speaking, a bull is after a lot of us. The trend in recent years has been for an increasing number of suppliers of veterinary products to sell direct to laymen. If this trend continues, could it not be rough on veterinarians, ethical supply houses and—ultimately—on the whole livestock industry?

Like we said, the bull's getting closer—almost breathing down our neck. *Maybe it's time to stop running.*

Realizing our dependence on each other, we are taking a stand. We hope to grab the bull by the horns and hold him long enough for you, the graduate veterinarian, to see him for what he really is.

We think you'll know what to do, so we'll only drop a hint: Why not send your next order to one of the companies who own and operate Affiliated or to some other ethical supply house—rather than buy from a supplier who feeds the bull?



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WASHINGTON NEWS—continued from adv. p. 10

FDA Publishes Milk Regulations

FDA published new regulations to prevent occurrence in milk of antibiotics and other drugs administered dairy animals. Under the regulations, such drugs may not be marketed for treatment of milk-producing animals if residues can be found in milk more than 96 hours after administration or if time of disappearance of drug from milk has not been determined. The *Federal Register*, August 31, 1960, contains statements of general policy or interpretation, and the specific amendments pertaining to certification of antibiotics and antibiotic-containing drugs.

Military Surgeons to Meet in Washington

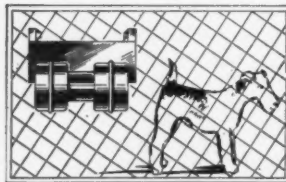
The 67th Annual Convention Association of Military Surgeons of United States, will be at Mayflower Hotel, Washington, D.C., October 31 to November 2, 1960. The Veterinary Section of the Association will have a scientific program November 1, 2:30 to 4:30 P.M. Dr. C. D. Van Houweling is chairman of the Program Committee of this section. Credit points authorized for Reserve Officers in attendance.



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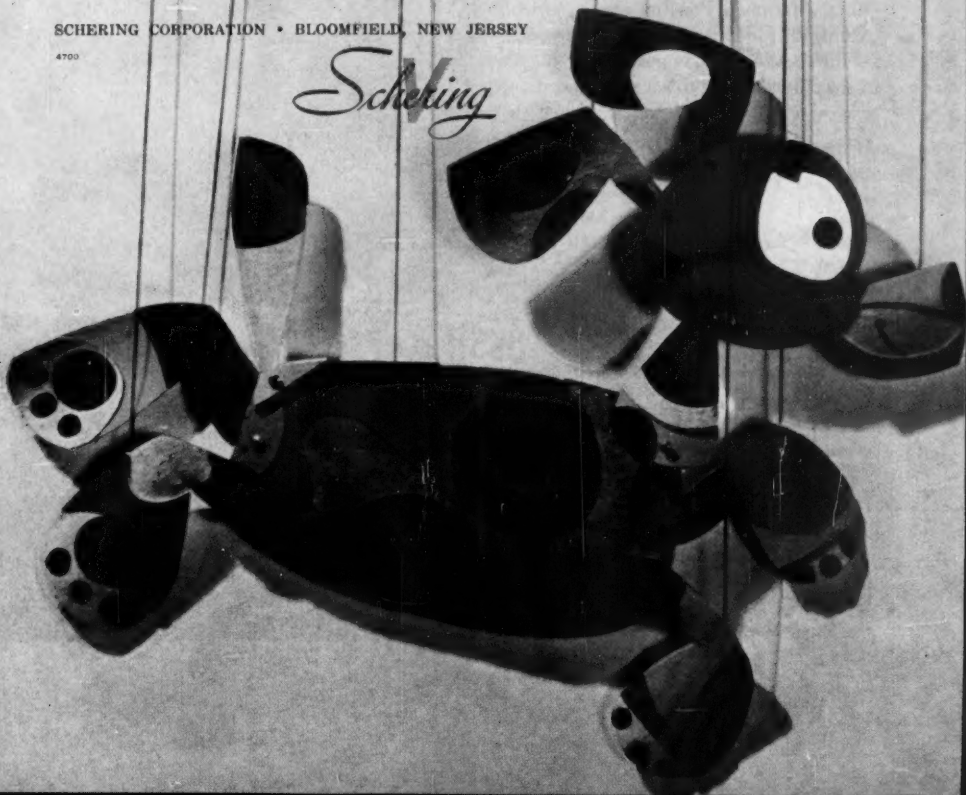
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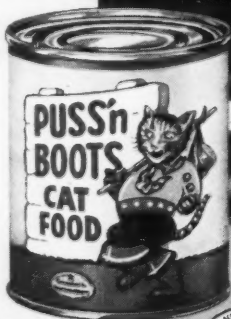
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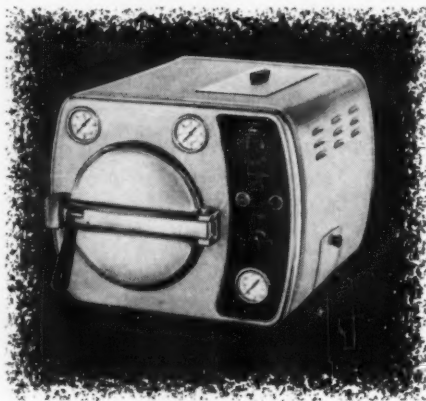
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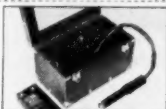
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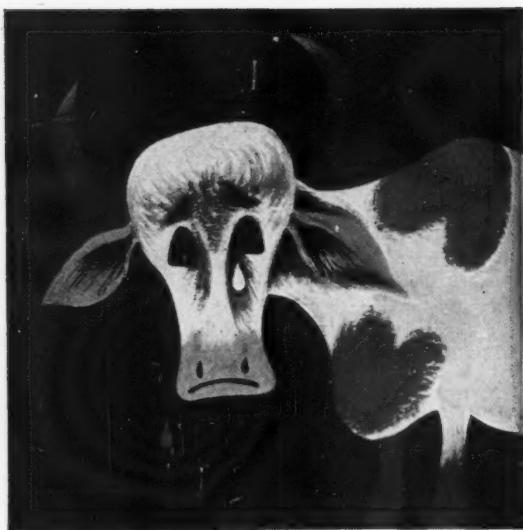
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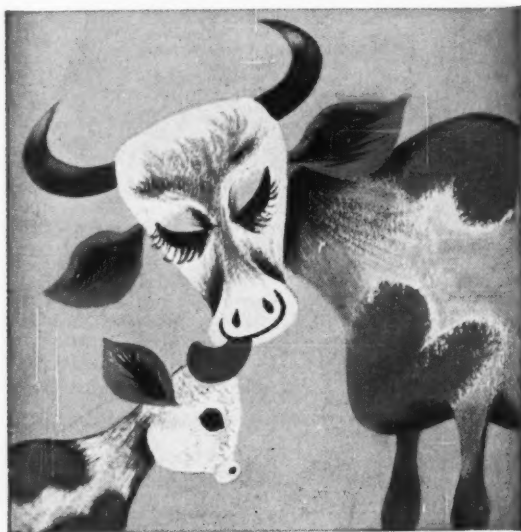
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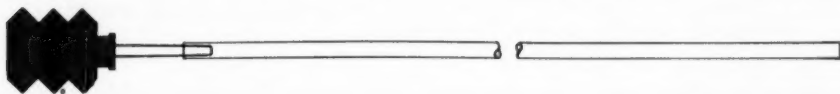
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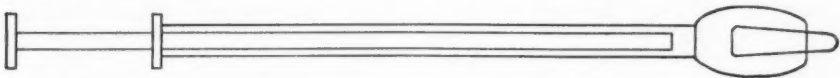
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1. Vigue, R. F., et al.: J. Am. Vet. M. Ass. 134:308 (April 1) 1959.

2. Vigue, R. F.: Personal communication.

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1. Friis, C.W.: About Life Restoration of Newborn in The General Practice, Jnl. of The Danish Assn. of Vet., Nos. 2-15, Jan. 1959.

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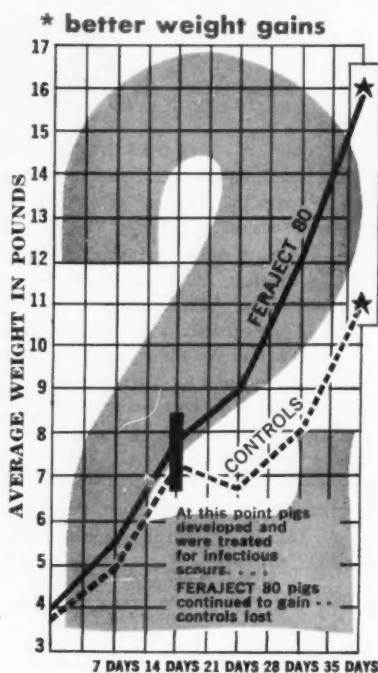
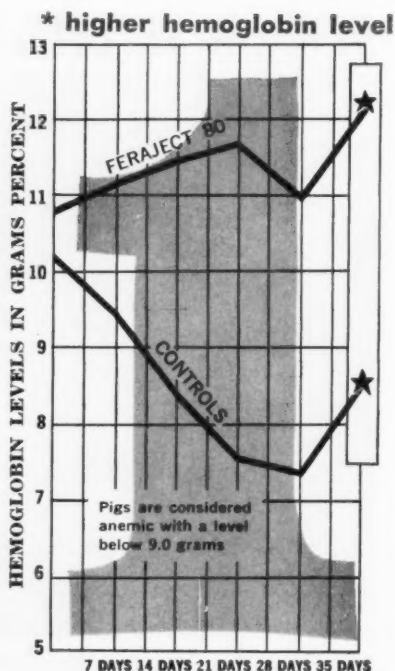
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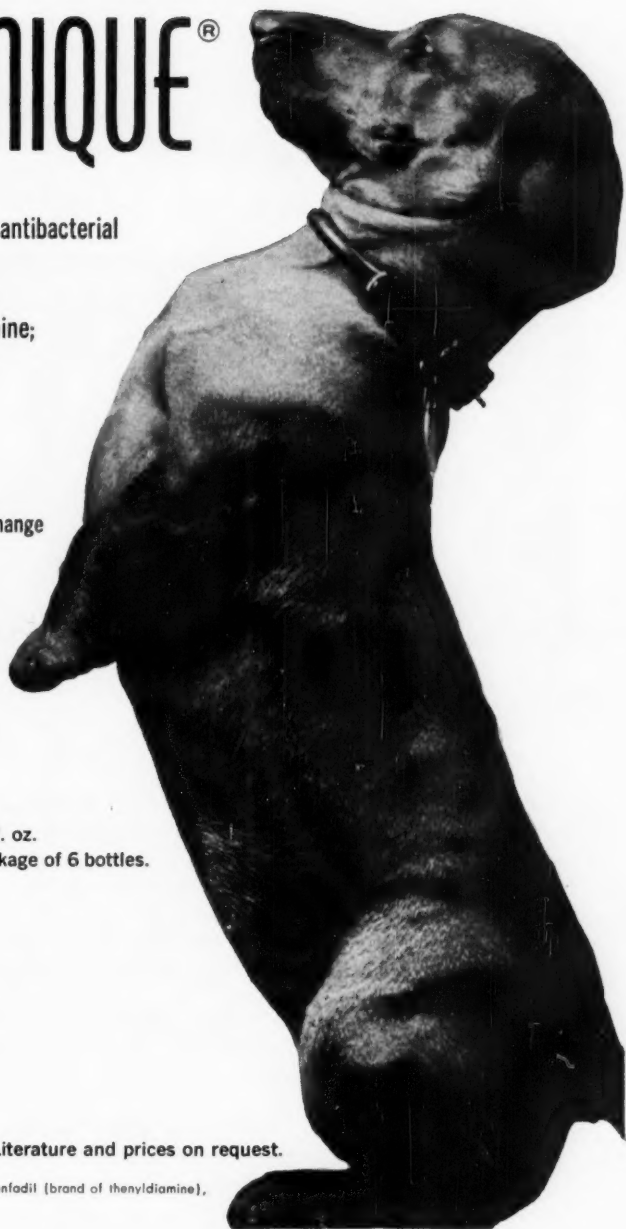
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1. Jones, S. V.; Belloff, G. B., and Roberts, H. D. B.: *Vet. Med.* 51:413 (Sept.) 1956.

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Vol. 137

No. 7

October 1, 1960

Journal

OF THE
AMERICAN VETERINARY
MEDICAL ASSOCIATION

President Scheidy's Address to the House of Delegates

It is now two years since we adopted a revised Constitution and Bylaws for our Association. With this revision came certain changes in the administration of the affairs of the Association.

The increase in receipts from dues and other sources has made it possible to employ additional personnel to attend to the many functions and activities which we believe are necessary and beneficial to the membership. Past-Presidents Kester and Armistead cited specific items that needed immediate attention. Past-President Rebrassier last year indicated that most of these needs had been or were being provided. During the past 12 months, the additional forward steps taken have significantly improved the services of our Association. Under the able direction of Dr. Kingman, our executive secretary, areas of responsibility were departmentalized. Additional personnel have been employed in accordance with our financial assets and practical coordination of function in the various areas.

New Services and Aims

During the past year, our greatest expansion effort was in communications. In our editorial department, we now have three veterinarians in addition to the necessary nontechnical staff to administer the affairs of this very important area. The semimonthly Association JOURNAL has a

This address was delivered at the 97th Annual Meeting of the AVMA in Denver, Colo., Aug. 14-18, 1960.



Dr. S. F. Scheidy

new format; and the *American Journal of Veterinary Research* is now published on a bimonthly basis, contains summaries in Interlingua, and provides a special section for the publication of brief descriptions of new techniques or procedures. As a result of these changes, many more manuscripts, abstracts, reports, and news items are being published. In addition, plans have been made to further improve the release of new items of interest to our membership; in the opinion of some individuals, this service was long overdue.

The other areas in which additional personnel was provided is the department of scientific activities, and in professional relations (including assistance in administering the research fund program). There

Oct. 1, 1960

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have been an increasing number of inquiries and requests from younger members of our association for financial assistance, especially for support in their postgraduate training. These young people are certainly deserving of assistance. The addi-

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tional training they seek is necessary in many instances to properly and adequately equip them for the demands that are being made in this era of rapid progress in the biological sciences. The basic training students now receive in our colleges provides an excellent foundation for the postgraduate training which, in turn, will prepare many of the candidates for important roles in teaching and research. We can look to these individuals to discover ways and means of improving and enhancing the kinds of service that can be rendered by their fellow veterinarians (those who, after basic training, enter directly one of the fields of animal agriculture, public health, or private veterinary practice). This is tremendously important for the practicing veterinarians who constitute the majority of our membership. It is for this reason that we should make every effort possible to assist these young people who are now seeking aid and guidance. They will be our members in the future.

To aid in this effort, we have prepared a booklet entitled "New Frontiers in Veterinary Medicine," which is available for distribution to members and others who may be interested in what our research fund has made possible for the 52 individuals who thus far have been recipients of stipends. Also, it clearly sets forth the purpose of the fund and the manner in which it is administered so that donors know just how their contributions are used. Incidentally, arrangements have now been

made to accept memorial gifts. This should be of interest to some of our members and friends. We are pleased that the members of the Women's Auxiliary will assist in our efforts in behalf of the AVMA Research Fund. This is in addition to the other fine work they are doing through their organization.

Despite the advances just mentioned, the department of professional relations is still hard-pressed to provide all the services that our growing membership requires and expects. There are many inquiries and requests that cannot be handled as promptly and thoroughly as we would like, merely because of lack of time and personnel. The suggestion has been made that so-called "field secretaries" be provided for extended service to our constituent associations and members. To this idea I subscribe and am convinced that the service must be provided. Such individuals could assist greatly in solving some of the problems arising or already existing within some of our constituent associations, merely by the fact that they would have time and useful information to offer. This increased service within and between constituent groups undoubtedly would help to bring about the long-sought and generally-agreed-upon desire for complete integration of all veterinary organizations—local, state or provincial, and national.

In this respect, I believe we made a good start during the past year by holding in Chicago a two-day conference attended by secretaries from some 40 constituent associations. They were indeed a diligent group and much good was accomplished. The exchange of information was helpful to many of our hard-working and usually underpaid secretaries.

The aims of that conference were so well realized that plans have been made to hold another one in November of this year. At the coming conference, topics of mutual interest not previously discussed will be presented. I should point out that, although much of the material at the conferences is advanced by the secretaries in attendance, the central office employees plan the program in accordance with suggestions from members of the constituent associations. A part of the travel and subsistence expenses for representatives to the conference is borne by the AVMA. We believe this is a desirable membership service.

In recent years, we have devoted special

attention to the members of AVMA student chapters located at various colleges in the United States and Canada. Here is an area where we have a real responsibility and an opportunity to render service. Since these young people will soon be our active members, where could we more beneficially exert our best efforts? During the past year, your officers and staff members have attended student chapter meetings at 15 colleges. I sincerely trust we can continue to attend such meetings in the future, as well as have the chapters send delegates and representatives to our annual conventions. By participating in campus organizations, students learn early in their professional lives the value of working with others to achieve common goals. This can only end in better understanding and closer cooperation in dealing with problems of mutual interest.

Officers and employees of the AVMA also were present in more or less official capacities at various constituent, regional, and special veterinary group meetings. Of necessity, this took much time and entailed many miles of travel. In most instances, the reason for appearing was to pass along information from the AVMA regarding its various activities, changes, progress, and plans. Undoubtedly, this kind of personal contact and communication is worthwhile and leads to much good work. However, I personally am of the opinion that the time of some of the officers, especially the president, could and should be utilized more effectively and profitably for the AVMA by having them attend more meetings of organizations allied with the AVMA. We are woefully lacking in our contacts with such groups, although we were able to be present at meetings of 10 or 12 of them, including the annual conferences of the A.M.A., U.S.L.S.A., Institute of Animal Agriculture, National Swine Industry, and others. Also, officers of the AVMA and allied groups joined in attending conferences of a number of organizations like the American Animal Hospital Association which discussed problems affecting the professional activities of our members.

Our program of public relations and publicity is progressing as well and as rapidly as is possible with the manpower and funds that are available. New approaches and activities are being encouraged. We again offered an exhibit prize at the National Science Fair; it was won this

year by Robert D. Towe, a Montana high school student who plans to study veterinary medicine. According to the reports available to me, there is increasing interest among high school students in science fairs, as demonstrated by the extensive participation in local, state, and national contests. The fact that we have shown an active interest in this popular type of contest is encouragement for young scientists and will, I'm sure, bring credit and respect for our profession. I should like to suggest that our constituent associations give serious consideration to supporting such contests and offering prizes in their respective geographical areas.

Last year we prepared a new version of a booklet entitled, "Veterinary Medicine as a Career." This continues to be a popular source of information for young people, and many thousands of copies have been distributed. Various local and state groups and student organizations, as well as women's auxiliaries, have aided in the distribution of these booklets. This help is appreciated and is, I'm sure, a very worthwhile effort in our over-all public relations program.

On the same subject, I would like to urge that more members of the association participate in the career-day programs given by high schools throughout the country. This kind of program affords an opportunity for us to present our profession in the proper light to potential future members. I should also mention that conferences with student guidance directors will provide an opportunity to pass along appropriate information which may be useful to them as well as to students.

A new directory listing veterinarians in the United States and Canada has been prepared and now is available. In the preparation of this directory, we attempted to collect information pertinent to our professional manpower. Unfortunately, the response to the questionnaire sent to non-members was poor, and, as a result, the publication is not as complete as we had hoped it would be. This should serve as a stimulus to each and every one of our members to cooperate in every way possible to provide useful information so that future issues will be more accurate and complete. Such vital statistics are tremendously important to our Association and, in fact, to the countries represented in it. This, again, is an area where close cooperation between

constituent and local associations can be most helpful.

Suggested Improvements

At the Executive Board meeting held in March of this year, several matters were again discussed that surely should be corrected by amendment or changes in the Constitution and Bylaws. A committee of the Board was appointed to study these matters and to submit a report. Specifically the matters referred to are the following:

Duties of the Vice-President.—To date this office has been chiefly honorary. Dr. Fred Pulling, our vice-president during the past year, has made appropriate suggestions to the Executive Board, and in these I concur. If we are to continue to entrust this office to an elected member, let us also entrust him with certain duties. Otherwise, we should eliminate the office.

Duties of the Past-Presidents.—As you know, the past-president is retained as a member of the Executive Board for one year. In general, his is a rather inactive status even though he usually has accumulated a great deal of information regarding the activities of the association. During his terms as president-elect and president, he usually has met with many groups, individual members of the association, and allied organizations. It would seem to me that one in this position has a great deal to offer the Association during the year following his presidency. Indeed, he probably would be well qualified to serve as chairman of the Executive Board. If the chairman were so chosen, then, in fact, he would really be elected to his position by the membership and not by their representatives on the Board. This arrangement should have appeal to the membership as a whole and would be another step toward a completely democratic election of officers of the Association.

Mail Ballot for Election of Officers.—For some 10 to 12 years, we have been discussing this matter in Board and Committee meetings. With the recent revision in the Constitution and Bylaws, one significant change in the election procedure was made—this was in the method used by the delegates to nominate candidates. We now have had several years' experience, and it would appear that the system is working satisfactorily.

Several constituent associations currently

are electing their officers by ballot and find it a satisfactory method. It promotes great interest and increased participation of members and is thus good for the organizations involved. I believe we could easily adopt such a system and increase interest among our members and at the same time permit those who cannot attend annual conventions to have a part in the selection of officers. This would be a rewarding experience for many of our members and would give them an added feeling of belonging.

My suggestion would be to have the delegates nominate candidates for president-elect and vice-president. Then, within 30 days after the nominations, a brief statement about each candidate (name, address, professional qualifications) and a printed ballot would be sent to all dues-paying members, and they would be allowed about 30 days to return the marked ballot. Of course, in order to maintain the integrity of a secret ballot, the voter's choices should not be identified until after his ballot slip has been removed from the envelope. This system is used by other organizations and has been found highly meritorious.

The successful candidates would be installed at the time of the next annual convention and serve in their respective offices for the following year. In this way, they would have time to arrange their personal affairs and to familiarize themselves with their official AVMA duties.

Apportionment of Voting Strength for Delegates.—At the present time, there is a noticeable discrepancy in the apportioning of votes for delegates to represent the constituent associations. This arrangement is not completely fair. It can be corrected if the votes are based on a more just and accurate standard, determined by the membership in a given area without the limitation to seven votes which is now spelled out in the Constitution and Bylaws.

Another system which might be feasible is to determine the number of delegates from each constituent association on the basis of the total membership in that particular member association. This might be an effective procedure and, in some instances, it would bring several additional delegates from geographical areas where a large number of AVMA members are concentrated. A number of other professional organizations have found this system to be quite workable.

I sincerely trust that serious thought will be given to these matters at this annual meeting of the House of Delegates and that the necessary amendments will be drafted to assure these forward steps in the administration of the affairs of our Association.

There are several other problems that in my opinion need early and positive consideration. These, too, have been in the minds of many of our members and have been discussed for several years.

One problem concerns the feasibility of remunerating the president and possibly president-elect, who are required to devote much time to the affairs of the Association. If adequate remuneration were provided, individuals who could effectively administer these offices would be more willing and ready to serve, unworried by the financial sacrifice which is now required, especially from the individual in private practice. There are several ways in which the necessary arrangements could be equitably handled. Other professional groups have such arrangements already in operation. Probably the most practical procedure would be to provide a per diem allowance plus travel and other special expenses within pre-established limits.

For several years, we have been talking about methods of better informing our membership about matters pertaining to their professional interests and organizations. Many of these matters are too informal or limited in scope to warrant publication in our technical journals. However, such information could very well be compiled and made available through a separate medium of communication, perhaps a newspaper with a title like the "AVMA News." This medium for the dissemination of information would, I'm sure, be most welcome and often valuable to our members. Since it would have to be financed out of our dues income, I would suggest that it be made available to members only.

Conclusion

Since the six hard-working councils have prepared detailed reports regarding their activities during the past year and these are available to you, I shall refrain from enumerating their accomplishments, problems, and plans. I would, however, like very much to compliment the members of these councils for the fine work they have done

and are doing for the Association. As you know, several of these councils are relatively new, but they now are well organized and a *modus operandi* for them to follow has been developed so that in the years ahead I'm certain much good work will be done by them. Suggestions and assistance from the general membership will be most welcome, and I trust that none of you will hesitate to let your opinions and suggestions be known to these variously working groups in our Association. I would urge that serious thought be given to the submission of nominations and to the election of council members so that they will be chosen because of interest and qualifications for the areas of service. This, I believe, is most important.

During the past two years, I have had an opportunity to attend many meetings and to consult with many of our members. I am pleased to report how greatly appreciated are the services we have been able to provide through the various councils, committees, publications, and other activities of the association. We have also received many useful suggestions and these are most gratefully acknowledged.

It has been said that there is nothing in life so unexpected and surprising as the arrival and departure of the great moments of our lives. These words are especially meaningful to me, for being elected as your president was one of the greatest thrills and challenges of my life.

This has been a thrilling and, without a doubt, the busiest time of my professional career. It has been a great honor to be of service to the Association. The cooperation, assistance, and support given to me by so many of you and by the membership in general has been and will always be deeply appreciated. It is regrettable that I could not devote all my time and energy to the problems in the many areas in which we are attempting to give service.

I accepted this office with a deep sense of humility and appreciation of its honor, realizing full well that had it not been for the encouragement and support of a great many people I would never have assumed the office. I have been fully conscious of the challenge and responsibility before me during the past two years because I was expected to represent you in many ways and in many places. My great hope is that I represented you in the manner you so justly deserve.

President-Elect Leasure's Address at Denver Meeting

Mr. President, Distinguished Guests, Fellow Veterinarians, Ladies, and Friends: It is indeed a privilege and a pleasure for me to address you on this occasion, the 97th Annual Meeting of the American Veterinary Medical Association. This beautiful mile-high city of Denver is indeed a delightful setting in which to hold a convention. For those of you who have traveled long distances and are relatively unac-



Dr. E. E. Leasure addresses Opening Session of 97th Annual AVMA Meeting.

quainted with Denver and its surrounding playground area, I would suggest that you linger sufficiently long after the convention to enjoy the mountains and their recreational areas.

At the outset, I want to express my appreciation and thanks to the many individuals, both men and women, who have worked so faithfully and hard during the year on local committees, making arrangements for your pleasure, convenience, and comfort. I would also like to express my appreciation and thanks to your elected delegates and officers, to the members of councils and committees, and to the central staff, all of whom have spent many hours in tedious and difficult work during the year preceding this opening session in the completion of the business of this Association. These individuals have dedicated themselves to the improvement of the Association and the veterinary profession and, in my opinion, have done an excellent job.

During the approximate years' time that I have served as your president-elect, it has been my duty and privilege to attend

the sessions of several annual meetings of state veterinary medical associations. I, therefore, feel compelled to inform you that I am greatly impressed with the caliber and the quality of the individuals of our profession. Since World War II, the average age of individuals in our profession has declined steadily, thanks to the influx of young, vigorous, well-educated and motivated individuals into the profession. The AVMA has reason to be proud of its members who are so ably carrying on our noble traditions.

I was also impressed with the well-planned, organized, and integrated programs of these meetings. Considerable work and thought in their planning had been devoted to providing technical, intellectual, and social inspiration for the membership. I must say also, that these associations did not overlook the value of informing the public that they were gathered to improve themselves to render better service to the people they would serve. At these meetings, I heard no complaints from the attending veterinarians about the lack of business. There was no evidence that they feared that the veterinary profession and its activities were fading from the agricultural scene. In fact, veterinarians everywhere seem to have all the work they can handle.

Veterinarians throughout the country are quite cognizant, however, of the changing agricultural picture, particularly in animal production. I am referring to so-called "vertical integration" wherein some kind of contract or compact is entered into by the producer, the banker, the food supplier, and the wholesaler or retailer. These programs usually call for the concentration of many large animals into small areas. Such concentration naturally leads to a newer type of veterinary service, one to which the profession must adjust. This, I believe, is being done. I think it is fortunate for the veterinary profession that this change has been comparatively slow and that we have had time to adjust ourselves, at least in part, to this changing picture. When animals are concentrated in large numbers, there is always the possibility that many more new problems will arise; thus, the services of the practicing veterinarian will be necessary and essential. Since we have been duly warned about these impending changes, it is my opinion that the

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versatility, the alertness, the aggressiveness, and the educational background of our professional people will enable us to meet the challenge of this changing agriculture. Certainly, we will solve these problems more quickly and readily than our predecessors dealt with a similar crisis, the fading of the horse from the agricultural scene.

With respect to this problem, some people are quick to inform us that there are now fewer large animal practitioners to care for an increasing large animal population. To me, this is as it should be, at least to a point, because veterinarians of today are much better equipped to care for more animals than ever before.

To support this statement I need merely to cite the vast improvement in education, in instrumentation, in newer drugs and biological products, and in communications—all available to the veterinarian.

We all realize that if the large animal population continues to increase and if the trend of veterinarians to enter fields other than large animal practice continues without an appropriate increase in graduates, then the pendulum will swing too far and rural veterinarians may find themselves unable to supply the necessary services. I do not wish to imply that the profession of veterinary medicine has reached its climax—its utopia, so to speak—in the development of its services. This would be far from the truth. In reality, there is no place for complacency in our profession because we have many other problems confronting us: our disease eradication programs for hog cholera, bovine tuberculosis, and brucellosis; and the impact of the "Delaney Amendment to the Federal Food and Drug Law" relative to food additives, to mention a few.

Educational Needs

My immediate predecessors, Dr. Scheidy, Dr. Rebrassier, and Dr. Armistead, in their addresses before you, have discussed the educational needs in our schools of veterinary medicine and in the profession. They have emphasized that we should apply continued vigilance in upgrading the educational process. I fully concur in their statements and believe that many of our problems will be solved through education. It has been stated by philosophers that since the turn of the century our knowledge

about specific subject areas has doubled each 15 years. Whether or not this statement is true, the impact of increasing knowledge in all areas of veterinary medicine has forced our schools to continually upgrade their curricular content. The educators of our schools are constantly seeking new ways and means of providing more time and space to add new courses and additional new information. They are particularly concerned with such areas as animal nutrition and management, radiologic medicine, and veterinary public health.

Recently, I reviewed the curricular content of the veterinary educational institutions as far back as 60 years. In this review, it was interesting to note that the AVMA established its Council on Education in 1919. This Council set up proposed uniform requirements for all veterinary schools, and was undoubtedly a great motivating force in the improvement of college programs. During these last 50 years, approximately three additional full years of instruction have been added to the veterinary curriculum. Now, during the last decade, our veterinary schools have made tremendous progress: they have revised their curriculums; added new graduate study programs; expanded their academic and research facilities and staff; and added thousands of dollars worth of new modern equipment. Yet, even these additions have not been enough to keep pace with our rapidly expanding knowledge in the sciences directly related to veterinary medicine.

Veterinary colleges, extension veterinarians, and state and local veterinary medical associations, through their conferences and meetings, are contributing greatly to the over-all picture of education by presenting new information directly related to practice and management problems. The joint movement of the feed milling industry and the practicing veterinarian in holding sectional and regional meetings has and will continue to assist in the solving of mutual problems which will ultimately benefit each as well as the producer.

In spite of the addition of eight new colleges of veterinary medicine since World War II, today's demands for new graduates far exceed the supply. Our new graduates are now entering many fields not previously available to the profession. Many different types of industry have discovered that veterinarians with their educational background are qualified for service with them.

The rapidly expanding population of the United States is requiring more veterinarians to supply the services that have long been established. An expanding population requires a corresponding expansion of available animal and cereal food products. Agricultural economists are predicting that the average beef consumption in 1975 will be 73 per cent greater than was the average in 1956-1958. It is reasonable to assume, therefore, that more veterinarians will be needed to look after this increasing livestock population than are now being graduated. The formula for producing more veterinarians is one of simple, cold facts: either the existing schools must accept more students or new schools must be established.

Opportunities for a career in veterinary medicine were never so bright as they are today. Veterinarians throughout the country have the potential of playing a vital part in the educational quality and status of our future veterinarians. You, my friends, are the best qualified, are the most strategically located, and have the greatest opportunity to single out the superior high school student, to discuss and to explain to him the great opportunities for a career in veterinary medicine. You can do more for recruiting high-quality students for the profession than anyone else, and I might add that the veterinary profession needs these superior students just as much as the allied medical sciences, physics, chemistry, and other areas. Since the days of Sputnik I, the various branches of the medical sciences have found themselves in a greater competitive market for the superior student than ever before.

Organization Activities

Operating under the new constitution adopted in 1958, your Executive Board, Board of Governors, and six councils met in orderly fashion as scheduled to dispatch your Association's business. The assigned duties of the reorganized central staff were expanded and carried forward as planned.

The affairs of your Association handled by your designated officers and members are too voluminous to report upon in the time allotted to me; however, considerable progress has been made by each of your six councils: Biological and Therapeutic Agents, Education, Judicial, Public Health

and Regulatory Veterinary Medicine, Research, and Veterinary Services.

Your publications have been improved and expanded. You probably recall the new format on the Association JOURNAL and its expanded size. A new feature in the *American Journal of Veterinary Research* is the Interlingua summaries. Your public information activities, particularly as related to booklets, youth activities, contacts with allied groups, publicity, and programs at all state levels, were expanded. The Washington Office was active in keeping headquarters and the membership informed of impending legislation.

An act that may vitally influence veterinary education in the future has been introduced into both houses of Congress. Since you have been informed of this through the JOURNAL, I will refer to the Act as Senator Humphrey's bill to provide \$35,000,000 for veterinary schools. Congress will probably not take action on the bill until next year when the bill will be introduced; however, if it is passed, our schools can look forward to considerable federal assistance.

Other noteworthy matters to be mentioned are the progress made by the Group Insurance Trust and the Research Trust, both areas having been improved and expanded. Your Board of Governors, Executive Board, and central office personnel have had under investigation during the year the possibility of producing an AVMA newspaper for the membership. Expenses related to personnel, production, and overhead, have delayed final action on this matter. There are those of us who believe that this publication could bring to the membership information and material not available to them through the JOURNAL.

One of the outstanding meetings held in Chicago during the winter was the First Annual AVMA Constituent Secretaries Conference. There was a free exchange of information and ideas that should prove beneficial to state associations in solving their many specific local problems of the future. This conference was well attended and its success indicates that it should become an annual affair.

Your Board of Governors, with several headquarters staff members, met in Washington, D.C., on May 19-21 for informal conferences with the key personnel of several divisions of the U.S. Department of Agriculture, the National Institutes of

Health, the Armed Forces, and other federal agencies that employ veterinarians.

These informal conferences were highly informative; it is regrettable that time will not permit my briefing you on specific services that these divisions render to our American public and, indirectly, to our profession. We were pleased to learn that the long-established animal disease eradication programs, animal and poultry disease research programs, and other federal programs would be carried forward as vigorously as anticipated budgets from Congress would permit. Conferences of this type promote better relationships between the profession and the federal agencies and, in addition, I am certain that they tend to bind together more harmoniously the various facets of our veterinary professional activities.

Women's Activities

The Women's Auxiliary to the AVMA, with their 7,500 members, have become an important force in assisting the AVMA. They have been enthusiastic in supporting their special projects which contribute to the veterinary profession; their loan fund project for assisting needy veterinary students now contains over \$19,000 and is loaned preferably to seniors in an amount not to exceed \$500 per student at 2 per cent interest. Many veterinarians, while students, have made use of this fund in the past few years. The Auxiliary also has a project of senior awards; one award of \$50 and an engraved certificate is available to each School of Veterinary Medicine, to be awarded to its most outstanding senior each year. The Auxiliary has been active, also, in contributing each year to the AVMA Research Fund (\$1,200 has been contributed this year to assist the Association in this worthy cause). In their public relations project, Auxiliary members all over the country are active in helping to set up TV and radio broadcasts and news-

paper coverage. We are appreciative of the part the Women's Auxiliary is playing.

Future Plans

As to future plans, I can assure you that your Association will continue to cope with the many problems that face it and the profession. Of these, I will recommend that the AVMA give more attention, through its Councils, to specific problems facing our practitioners, and that they aid in solving them. I refer to: (1) the matter of the sale of veterinary biological products and drugs across the counter by laymen, many of which should be restricted to professional use and sale only; (2) the problems, arising in animal disease eradication and regulatory programs, that involve a conflict between professional and lay services and the establishment of equitable professional service fees; and (3) a continuing study to be made of the changing agricultural scene, and in particular, its needs for a changing veterinary service.

Each problem, new or old, will be assigned to the proper section of your Association where it will be considered fully and carefully, with dignity and respect; thus progress is bound to be made. I predict that services to the membership, now so apparent, will be expanded and improved.

Since the Constitution under which the AVMA is now operating is based upon democratic principles, there is no reason why the voice of every member cannot and should not be heard. Your constructive criticism, your ideas for growth, reform, and advancement will be appreciated. The orderly procedure is through your local and constituent associations to the House of Delegates, to the Councils, to the Executive Board, and to the headquarters staff. Your officers all stand ready to implement the programs and policies that you develop and that you wish to have as a part of the AVMA in Action.

Spread of Q Fever in Man

Incidence of Q fever in man, contracted from livestock infected with Q fever, is increasing in the United States. Bovine Q fever, found in only 7 states in 1949, now must be considered enzootic throughout the country. Human Q fever is being recognized in areas previously considered free of infection. Unrecognized human Q fever may also occur in areas with known animal reservoirs.—*Pub. Health Rep.*, 75, (1960): 135.

Bovine Papular Stomatitis

I. Recognition in the United States

Richard A. GRIESEMER, D.V.M., PH.D.
Clarence R. COLE, D.V.M., PH.D.

BOVINE PAPULAR STOMATITIS is a relatively mild, viral disease of calves characterized by proliferative lesions in and around the mouth without systemic signs of disease. The disease was first described in Europe around the end of the nineteenth century during epizootics of foot-and-mouth disease; however, it has not been recognized previously in the United States.

The disease received its name because the proliferative lesions in the mouth resemble papules. The resemblance of these lesions to early stages of foot-and-mouth disease and vesicular stomatitis, and the recognition of papular stomatitis in this country, make the development of diagnostic criteria particularly significant. Other stages of papular stomatitis might be confused with mucosal disease or viral diarrhoea.

The purposes of this report are to describe the clinical aspects of the naturally occurring disease and to indicate some of the more important differential features. A brief review of the literature is included since this is the first report of the disease in the American literature.

Review of Literature

In 1884, stomatitis, observed in 4 heifers in Belgium,⁴ was characterized by proliferative, wartlike lesions on the buccal mucosa, inner surface of lower lips, muzzle, and margins of lips, without any other signs of disease. Microscopically, there was hyperplasia of the rete pegs. Lesions developed slowly, then quickly regressed and were replaced by red or yellow spots which persisted for several weeks. The Belgian author⁴ found no reference to this stomatitis

in the literature, so he named the disease "la stomatite papillaire ou papillomateuse" (papular or papillomatous stomatitis).

In Germany, one investigator⁴⁸ observed a similar disease in 6 young cattle in a herd. In addition to warty granulations, there were numerous red ulcers on the palate and, to a lesser extent, on the tongue which persisted as yellowish brown spots for several weeks after healing. There were no vesicles and no lesions on the feet.

Several young animals in 2 large shipments of cattle in Germany had warty nodules, ulcers, and red spots on the oral mucosa, especially on the upper and lower gums and hard palate.⁴⁹ Some of the ulcers were partly covered by adherent brownish crusts with a "dead" appearance. The author thought these ulcers were formed from the dried tips of warty projections of the lamina propria. The course of the disease was mild and afebrile, and lesions were confined to the mouth.

Later, in Germany, a similar disease was described¹⁸ in young cattle. Nodules and erosions 1 cm. in diameter, or larger, were found on the lower edges of the nostrils, muzzle, inner surface of the lower lips, dental pad, hard and soft palate, upper and lower gums, edges of the lips, mucosa of the cheeks, the pharynx, tip of the tongue, and in front of the frenum linguae. Tiny vesicles were described in the centers of the nodules which quickly ruptured but which were not like those of foot-and-mouth disease. The disease was not reproduced in cattle exposed artificially to saliva from affected animals.

In Germany in 1899, a similar disease in cattle was seen⁵ and mistakenly considered to be "sporadische aphthenseuche" (vesicular stomatitis).⁶ Again in 1904, apparently papular stomatitis was reported, but the original article was not available for review.⁴⁶

The appearance of the lesions²⁹ led, in 1905, to the proposed name "stomatitis papulosa bovis specifica." The disease was successfully reproduced in cattle with portions of oral lesions, whole blood, and filtered serum. Lesions were present in the mouths of some cattle as long as 4 months. Esophageal lesions were found in 2 experimental calves. Several animals had tiny crusts in the skin during the disease. Microscopically, there was ballooning degeneration of the cells of the stratum granulosum.

The literature on pseudoaphthous stomatitis was reviewed in 1906, but no original material was presented.³ One author²⁷ found the disease only in ani-

From the Department of Veterinary Pathology, Ohio State University, Columbus.

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imals with light-colored muzzles. Transmission attempts with saliva were unsuccessful. Several reports around 1900 described a disease of calves which was probably papular stomatitis.^{22,23,24} Attempts to transmit the disease to sheep, goats, pigs, and 1 calf were unsuccessful.²⁵ Papular stomatitis was not seen in the United States in 1915.²⁶ One article, often referred to in the German literature, could not be found at the locus cited.⁹

The disease was easily transmitted by scarification of the oral mucosa,²² but the same method failed to infect the teats, udder, penis, scrotum, and the skin of the abdomen and neck. Lesions in animals with naturally occurring cases appeared first on the muzzle in the region of the nostrils. Acidophilic, intracytoplasmic inclusion bodies of various sizes were found in degenerating epithelial cells in the mucosal lesions. A suspension of virus in glycerin under vaseline at 2 C. was still infective after 5 months. The virus did not produce infection in horses, sheep, goats, rabbits, guinea pigs, mice, or embryonating eggs. Material from the fifth egg passage was inoculated into a cow, but no lesions resulted.

The virus was not demonstrable in filtered serum.²⁷ Several cases of papular stomatitis were described¹⁴ in Poland under the name "pseudoaphthous stomatitis of cattle." Viruses isolated from meningitis in man and "epizootic pseudoaphthous stomatitis" in cattle were found to be the same serologically.^{28,29} From the description, the disease in cattle was apparently papular stomatitis, but insufficient evidence was presented to confirm an etiologic relationship with disease in man.

While searching for a possible viral agent in bovine hyperkeratosis, the investigators²³ discovered a transmissible proliferative stomatitis in cattle that were on a hyperkeratosis-producing diet. With the exception of young calves, the proliferative stomatitis did not usually develop when hyperkeratosis-producing foodstuffs were not fed prior to, or in conjunction with, exposure of test animals. No reference was made to papular stomatitis but the diseases are similar. Attempts to produce disease with the virus in horses, sheep, pigs, rabbits, and guinea pigs were unsuccessful, although some of them were on hyperkeratosis-producing diets. One of 6 dogs had proliferative lesions at the inoculation sites in the mouth. Local proliferative lesions developed on the hands of 2 people who had been working with affected calves.

Wartlike lesions in the mouths of calves were encountered in New York during experiments on hyperkeratosis.¹² Dutch investigators¹³ also reported the presence of a proliferative stomatitis in young cattle with naturally occurring hyperkeratosis. Papular stomatitis and a chronic systemic disease of unknown etiology were seen concurrently by another investigator.³⁰ The latter report described lesions in the esophagus in 2 calves and 1 papule in the rumen in 1 calf in addition to the oral lesions.

Structures resembling viral particles could be seen in infected cells examined with the electron microscope.³¹ In an Australian abattoir, it was estimated that as high as 5 per cent of young cattle slaugh-

tered had lesions of an erosive stomatitis.¹⁹ The description given is that of papular stomatitis.

Since completion of this study, papular stomatitis has been reported in East Africa.^{32,33} The virus produced a cytopathic effect in tissue cultures.

Clinical Investigation

Papular stomatitis was encountered in the Ohio State University beef herd during a routine study of diseases of calves. Although the management and veterinary care of this herd of over 200 head were excellent, the presence of papular stomatitis had not been suspected. Mild, persistent rhinitis had been observed previously in some of the young adult cattle. While little is known about the etiologic agent or pathogenesis of the rhinitis, it is commonly found in cattle in central Ohio, and it is presumed to be of little economic importance. The disease is characterized by thick, grayish white strands of exudate in the external nares and by frequent licking and excoriation of the floors of the nostrils. However, when several apparently healthy young calves were examined, hyperemic foci and slightly raised papules were found in the floors of the nostrils instead of excoriations. Similar lesions were found in the mouths. These findings prompted peri-

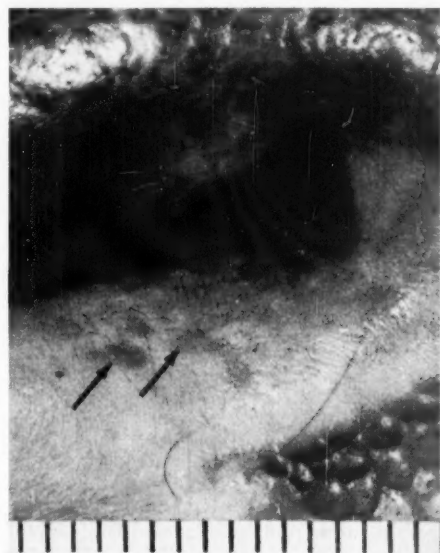


Fig. 1—Early, hyperemic, slightly raised foci (arrows) of bovine papular stomatitis in the ventral margin of a nostril. The scale is in millimeters.



Fig. 2—Multiple foci of papular stomatitis are visible on the upper lip, dental pad, and hard palate of a calf with the naturally occurring disease. Although the lesions are level with the surface or slightly raised, they have the appearance of erosions.

odic examination of all the calves in the herd. Within several months, nearly every calf under 1 year of age developed similar lesions. The lesions were often transient and mild; frequent, careful examinations were necessary to detect the disease.

The first evidence of disease was the appearance of hyperemic foci, 2 to 4 mm. in diameter, located most often on the ventral margins of the nostrils (fig. 1). They blanched readily on digital pressure. Occasionally primary lesions appeared on the palate or inner surfaces of the lips. In 12 to 18 hours, the center of each focus became raised above the surface, forming a low, convex papule (fig. 2). Frequently a central, whitish, slightly roughened area appeared on the next day. On subsequent days, it slowly enlarged until there was an area 1 to 5 mm. in diameter slightly raised and roughened and surrounded by a narrow border of hyperemia. A few such lesions progressed to roughened papillomatous plaques over 1 cm. in diameter (fig. 3) which were firmly attached. The lesions persisted from 1 day to 2 or 3 weeks. They then quickly regressed leaving yellow- or red-brown spots that persisted for several weeks more.

Secondary lesions developed in 1 to 20 days after the onset of the primary lesion. They were found on the ventral margins of the nostrils, muzzle, skin around the muzzle, lips, palate, dental pad, buccal papillae, dental palate behind the incisors, floor of the mouth, frenum linguae, and tongue. The plate and inner surface of the

lower lips were most often affected. On the tongue, lesions were found on the lateral margins and ventral tip and, in a few instances, on the dorsal papillae. Lesions persisted for variable lengths of time; new ones appeared and old ones independently regressed so that lesions in all stages of development could be seen at one time. The lesions frequently persisted for 3 or 4 months; however, in some calves, only a few lesions developed and these regressed and disappeared after a few days. Days or weeks after apparent recovery, new lesions might suddenly again be visible.

Slight variations in the appearance of the lesions were associated with the anatomical locations. On the ventral margins of the nostrils, multiple papules tended to coalesce forming an irregular "cobblestoned" surface. Lesions at the margins of the muzzle on the medial wing of the external nares were often large, about 1 cm. in diameter, and circular in shape (fig. 3). In the skin around the mouth, central roughened areas were sometimes not very prominent, and lesions appeared as bright red rings. Lesions in the buccal mucosa were confined to the tips of occasional papillae which were at first intensely hyperemic and later frequently ulcerated. On the palate, the contrasting color and the sharply delimited borders of the lesions frequently created an illusion of erosions. Very close scrutiny was necessary to determine whether they were slightly raised or level with the surface. In pigmented mucosae and skin, lesions were often unde-

tected until the healing stages when they appeared as focal, grayish discolorations which persisted for several weeks.

The presence of the lesions did not appear to cause calves discomfort; they continued to eat and gain weight normally. There was no excessive salivation, and the calves did not resist palpation. Lesions were not detected on the feet or teats, and there was no lameness. None of the calves had fever. In many instances, because of the absence of systemic signs, the disease would not have been detected had the mouth not been examined. All the calves recovered without treatment.

Naturally Occurring Disease Under Laboratory Conditions.—Four calves were removed from the herd to the laboratory for study; 2 of them were killed early in the course of the disease for histopathologic study. The other 2 developed papular stomatitis spontaneously in the laboratory 4 days after they were removed from the herd, and lesions were still present when they were euthanatized 54 and 73 days, respectively, after the onset of the disease. The course of the disease and the appearance of the lesions were identical with those on the farm. Rectal temperatures were taken twice daily, and blood counts were performed daily. No fever or leukopenia was detected. At necropsy, only 1 lesion was found in addition to those discovered clinically. In 1 calf, 20 papillary nodules 2 to 4 mm. in diameter and 1 to 2 mm. high were found in the esophageal mucosa within 12 cm. of the cardia (fig. 4). The histopathologic study of the naturally occurring and experimentally produced disease will be presented in a subsequent report.¹¹

Discussion

The diagnosis of bovine papular stomatitis was based on the distinctive proliferative nature of the lesions, the restriction of lesions to areas in and about the mouth, the lack of systemic signs of disease, the long, mild course, and the histopathologic features. The disease was identical with that reported in Europe.^{29,43} In addition, papular stomatitis was experimentally reproduced in calves with the virus isolated in embryonating eggs and tissue cultures from our naturally occurring cases.¹⁰

Two striking features of the disease are the organ and species specificity. Following



Fig. 3—A large, circular, slightly roughened and raised lesion (arrows) of papular stomatitis on the medial wing of the nostril at the margin of the muzzle (A).



Fig. 4—Papillary nodules in the mucosa of the esophagus of a calf with naturally occurring papular stomatitis. The scale is in millimeters.

formation of the primary lesion, secondary lesions appear to result from hematogenous spread. On only a few occasions were lesions found on opposing surfaces of the lips where they might have spread by contact. European investigators^{29,43} demonstrated the virus in the blood of affected animals and were able to reproduce the disease by subcutaneous and intravenous inoculation. In spite of hematogenous dissemination of the virus, lesions were found only in the vicinity of the mouth, nose, and upper digestive tract.

As yet, cattle have been the only animals found to be naturally infected. Localized papular lesions developed on the skin of the hands of 2 people who had been working with calves affected with a disease similar to papular stomatitis.²⁸ Attempts have been made to infect horses, sheep, goats, pigs, dogs, rabbits, guinea pigs, suckling and weanling mice, and embryonating eggs. Except for one experiment²⁸ in which 1 of 6 dogs developed papillomatous lesions at the inoculation site, all have been unsuccessful. In Europe, it was concluded that the virus is extraordinarily species specific.⁴³

The economic importance of this disease is still unknown. Cases resembling papular stomatitis have been reported from Belgium,⁴ Germany,^{5,12,15,29,30,32,37,39,43,46,48} Hungary^{14,21} France,²⁷ Poland,⁴¹ Holland,¹⁸ Australia,¹⁷ and East Africa.³⁵ Fatalities have not yet been recorded, but the morbidity in affected herds approaches 100 per cent when examinations are made over several months.

The incidence of papular stomatitis appears high in central Ohio; it was difficult to find unaffected herds from which to purchase experimental calves. Similar cases have been observed by us in calves in Maryland. The disease is probably widespread throughout the world.

It is possible that under some conditions papular stomatitis is not as mild as previously described. We have observed 2 herds in Ohio in which calves had fever, anorexia, and mild diarrhea along with oral lesions of papular stomatitis.

In Europe, inclusion bodies considered to be pathognomonic were found in the cytoplasm of affected epithelial cells.⁴³ Although similar inclusions were found in every case by one investigator,³⁰ their importance as a diagnostic criterion has not yet been established. No serologic test has

been developed. East African investigators³⁴ did not find significant levels of neutralizing antibody in the serums of the majority of recovered animals; probably little immunity develops. New lesions appear throughout the weeks- or months-long course. Lesions of papular stomatitis are often found in older cattle intercurrent with another disease.

The disease with which papular stomatitis is most likely to be confused is erosive or ulcerative stomatitis. Some of the diseases reported as erosive, ulcerative, or necrotic stomatitis^{1,2,19,20,44,45,49,50} had similar descriptions to the mycotic stomatitis described in 1904.^{24,25} Others were associated with febrile signs and diarrhea, and they probably represented viral diarrhea.^{7,42} However, 4 reports from Hungary,⁴⁰ South Africa,²² India,³¹ and the United States³⁰ dealt with a relatively benign disease in calves characterized by erosions and ulcers in the mouth without fever, leukopenia, or diarrhea. The only essential difference from papular stomatitis was that the lesions progressed to erosion or ulceration. Further pathologic and serologic studies are necessary to define these 2 diseases. It must be emphasized that the lesions of papular stomatitis are often mistaken for erosions because of their sharp outlines and contrasting colors; moreover, focal ulcers are occasionally found in papular stomatitis, presumably from bacterial contamination.

The papular nature of the lesions, particularly the occasional papillomatous appearance when there were confluent, roughened papules, was suggestive of papillomatosis. Lesions of papular stomatitis were not generally found in the skin except around the mouth and muzzle, and skin lesions were always accompanied by oral lesions. Intradermal inoculation^{28,43} of calves produced no infection and, in one study,²⁸ no immunity to papillomatosis virus. Lesions of papillomatosis are characterized by severe papillary acanthosis and hyperkeratosis with little hydropic degeneration. No lesions were produced when the papular stomatitis virus was inoculated into embryonating eggs.

The egg inoculation and the location of the lesions also help to distinguish papular stomatitis from cowpox. Vesicles or pustules were never observed. Inoculation of the corneas of rabbits and the teats, udder, penis, or scrotum of calves produced no infection.⁴³

Although the papules in papular stomatitis resembled some early stages of foot-and-mouth disease, there were no vesicles or lesions on the feet and teats. There was no fever, excessive salivation, smacking of the lips, or painful reddening of the mouth. Guinea pigs have not been found susceptible to papular stomatitis.

Grayish, slightly raised plaques and ulcers occur in the mouth in knopvelsiekte (lumpy skin disease) and there are intracytoplasmic inclusion bodies in the lesions; however, lesions are also widespread in the skin.

In papular stomatitis, lesions may occur on the tongue, but are not as extensive or erosive as those described for "peeling tongue" or Armagh's disease^{23,35} in Ireland or "furry" or "scaly tongue"^{22,50} in South Africa.

Summary

Naturally occurring bovine papular stomatitis is reported for the first time in the United States. It is a mild viral disease of calves characterized by proliferative, papular lesions in and around the mouth; a long, mild course; and the lack of systemic signs of disease. The disease appears to be widespread throughout the world with a morbidity approaching 100 per cent in affected herds. The course is prolonged but afebrile, and treatment is not considered necessary. Awareness of papular stomatitis as a disease entity is particularly important since the lesions might be confused with early stages of foot-and-mouth disease or with viral diarrhea.

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Counterbalance Aids Bovine Fracture Repair

An 18-month-old Aberdeen Angus bull broke his right hindleg just above the stiffe joint in a fight with an older bull. Although the young bull was valuable and was to be a herd sire, he was not insured. Consequently, the owner decided on treatment rather than salvage.

The bull was restrained with chloral hydrate, and a fetal extractor was used to extend the fractured leg. Using a small Thomas splint as a model, the welder made a large one from lengths of 1-inch rod and $\frac{3}{8}$ - by 2-inch slab steel to fit the bull. He bent the rod to encircle the thigh and welded the slab to this so that it extended beyond the hoof. The splint was padded heavily, put in place, and the hoof was wired to the end of it.

To offset the weight of the splint, a counterbalance was used; however, it took 4 days to get someone to come out and install it properly. During this time, the leg swelled greatly, and the bull was in considerable pain. Within an hour after the counterbalance was put on, the bull

was walking around the stall, dragging the splint.

The counterbalance was made by attaching a swivel to the top of the splint. From the swivel, a rope was passed up to a pulley about 10 ft. above the middle of the stall, across to the outside of the stall, through another pulley, and down to another swivel attached to a bucket. Stones were put into the bucket so that it exactly offset the weight of the splint.

When the splint was removed 5 weeks later, the bull walked on the affected leg. There was a large eroded area on the medial side of the thigh, and the muscles had atrophied considerably. A week later, when the bull was turned out, he immediately ran to the far end of a field and mired himself in a mud bank. Following this incident, he developed pneumonia, but recovered with treatment. A month later, he was put into service.

In time, the muscles filled in, and the eroded area healed nicely. A year later, he had already sired some nice calves.—*Thomas B. Follis, D.V.M., Taylorsville, Ky.*

Carotid Body Tumor

in the Dog

Klaus HUBBEN, V.M.D., M.S.
Donald F. PATTERSON, D.V.M.
David K. DETWEILER, V.M.D., M.S.

THERE have been only 5 reported cases of carotid body tumor in the dog, whereas approximately 350 cases have been reported in man.^{3,6,16} The tumor has been described well and classified.^{5,9,17}

The normal carotid bodies in man lie near the point of origin of the internal carotid arteries; they occupy a similar position in the dog. More precisely, the canine carotid body is situated medially in the bifurcation and is attached intimately to the origin of the occipital and ascending pharyngeal arteries, *i.e.*, it is nearer the external than the internal carotid artery.¹

The developmental anatomy of the carotid bodies is not clear. They have been said to originate from mesodermal portions of the third branchial arch and the earliest connections are with the artery of the arch and ectoderm of the ninth cranial nerve, thus accounting for the mixture of vascular and neural elements.⁸

The presence of cells in carotid bodies which are stained brown by potassium chromate led to confusion in early anatomic studies. These cells were only faintly chromophilic and overemphasis of this characteristic resulted in erroneous association of the carotid body with true chromophil tissues such as the adrenal medulla.

Carotid bodies are chemoreceptors concerned with oxygen and carbon dioxide levels and pH of blood. In addition to the carotid and aortic bodies, the ganglion nodosum of the vagus, the glomus jugulare, and the ciliary ganglion of the orbit have been included in the chemoreceptor system.^{12,15} The functions of the last 3 are

still unknown. The possibility that they, too, may be chemoreceptors is based chiefly on similarity of their morphology and innervation to that of the carotid and aortic bodies. Impulses from the carotid bodies act on the vasomotor, cardioregulatory, and respiratory centers. The afferent nerve fibers enter the neuraxis through the ninth and tenth cranial pairs of nerves. The special value of the chemoreceptors to the organism resides in their ability to continue to set up a strong reflex drive when exposed to conditions such as anoxemia which depress the cells of the center. Reflexes from the carotid and aortic bodies are solely responsible for the increase in respiratory depth which constitutes the body's chief defense against acute anoxemia. Stimuli from these chemoreceptors are responsible for most, if not all, respiratory stimulant effects of cyanides, sulfides, nicotine, and lobeline. The respiratory response of the whole organism to rising carbon dioxide tension is not measurably affected by chemoreceptor denervation since the central effect of carbon dioxide remains unimpaired.

Literature

The 5 carotid body tumors reported in dogs were in a male Boston Terrier, 12 years old, that also had an aortic body tumor; a male Boston Terrier, 8 years old, that also had a nerve sheath tumor of the left eighth cervical nerve; a male Boxer, 11 years old, that also had an aortic body tumor; a male Cocker Spaniel, 30 months old, that had bilateral carotid body tumors;⁶ and a male Boston Terrier, 10 months old.¹⁶ In contrast, aortic body tumors are more common in dogs. There have been approximately 80 reported.⁷ In man, the carotid body type is the most common of the chemoreceptor organ tumors. The concurrence of multiple tumors of chemoreceptor organs and aortic body tumors has not been reported frequently in man.^{3,4,8,10,11,18,14}

From the School of Veterinary Medicine, University of Pennsylvania, Philadelphia.

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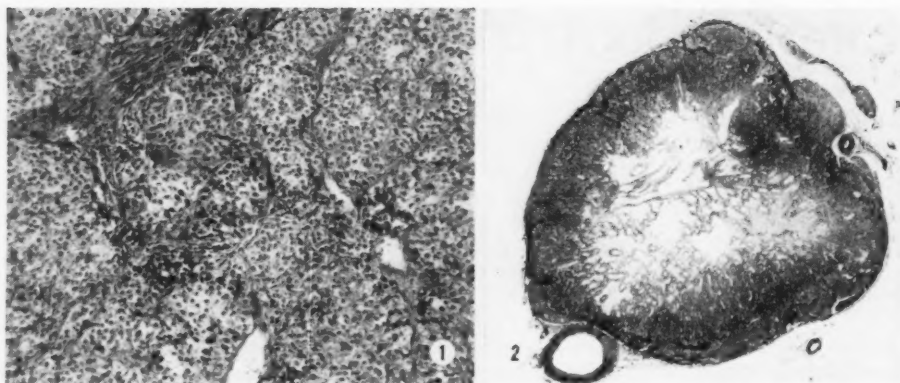


Fig. 1.—In a carotid body tumor of a dog (case 1), prominent branching stroma divide the tumor cells into small groups resulting in a glandular appearance. H & E stain; $\times 60$.

Fig. 2.—Cross section through a carotid artery and carotid body tumor of a dog (case 1). Notice centrally located spaces which contained a mucoid material; this material was present in all 3 dogs. H & E stain; $\times 4$.

Case Reports

Three dogs—a female Boston Terrier, 13 years old, with a tumor of the left carotid body; a female Boxer of unknown age, but judged as aged by all usual criteria, with a tumor of the right carotid body, an aortic body tumor, and 2 other benign tumors; and a male Boston Terrier, 15 years old, with a tumor of the left carotid body and an aortic body tumor—were examined, treated, and necropsied at a clinic in Philadelphia.*

Case 1.—A 13-year-old female Boston Terrier was first presented for examination because of a purulent vaginal discharge. Clinical examination and hematologic findings indicated mild endometritis. The examining clinician observed short bouts of tachycardia but no electrocardiogram was recorded. Over a period of 3 months, the dog apparently recovered and was not examined again until 7 months after the first admission. At this time, the dog was presented because of fainting spells lasting 1 to 2 minutes. Heart rate was 29 per minute, and atrial sounds could be heard between ventricular beats. When an electrocardiogram was taken, a complete heart block was revealed. A poor prognosis was given, and the dog was euthanatized at the owner's request.

At postmortem, the abdomen was slightly distended externally. Upon opening the

abdominal cavity, a large quantity of amber-colored fluid was seen to be responsible for this distention. When the skin was removed from the neck, a mass measuring 1.2 by 1.9 cm. was found posterior to the left occipital condyle and closely adherent to the adventitia of the left common carotid artery. On cut surface, the mass was gray to reddish brown and appeared to be encapsulated. Other postmortem findings were: pulmonary atelectasis, subacute nephritis, focal hyperplasia of pancreatic ductal tissue, adrenal cortical hyperplasia, hepatic necrosis and hepatitis, edema of the myocardium, and cloudy swelling of the myocardial fibers. There was slight medial thickening of the small branches of the coronary arteries. There were no apparent lesions which could produce the complete heart block seen on the electrocardiogram.

The microscopic appearance of the mass in the neck was typical for carotid body tumor.^{5,17} It consisted of masses of epithelial cells separated by connective tissue bands and numerous blood vessels. The separation of the cells into alveolar-like groups or clusters by fine divisions of connective tissue gave the tumor a glandular appearance in some areas (fig. 1). In other areas, the cells were arranged in solid sheets. In the center of the mass, the cells were scanty; large spaces between the connective tissue stroma were filled with pale, eosinophilic, delicately fibrillar, mucoid material producing a vacuolated appearance

*School of Veterinary Medicine, University of Pennsylvania.

on section (fig. 2). Numerous blood vessels, sometimes aiding in the separation of cells into alveolar groups, were a prominent feature (fig. 3). As the arteries became smaller through branching, they were no longer enclosed in connective tissue and became closely surrounded by the tumor cells. Examination under high power magnification in some areas revealed the peritheliomatous structure listed as a diagnostic criterion by some authors.⁵ The tumor cells were large and irregular, with abundant pale or vacuolated cytoplasm. The cellular membranes were frequently indistinct. The nuclei were round, usually with a single nucleolus, occasionally with 2 or more; they had numerous, fine, basophilic granules. Some cells were smaller with a small, dense, irregular nucleus, and pale scanty cytoplasm. In addition, there were a few large cells which had large oval or sausage-shaped, pale, vesicular nuclei (fig. 4A). There was a dense connective tissue capsule with no evident invasion of the capsule or the adjacent carotid artery.

Case 2.—An aged female Boxer was killed at the request of the owner, without history or complete physical examination. However, a resting heart rate of over 260 beats per minute was observed and an electrocardiogram was taken just prior to euthanasia. The electrocardiogram recorded a supraventricular tachycardia with atrial and ventricular rates of 280 per minute. Manually induced respiratory arrest resulted in transient slowing of both atrial and ventricular rates to one half or one fourth of the above rate for 1 to 2 beats. Auscultation of the heart revealed no murmurs.

On postmortem, there were numerous sebaceous adenomas on the skin of the head and neck. These varied from 0.5 to 1.5 cm. in diameter. There was a cavernous hemangioma, about 1.5 cm. in diameter, in the subcutaneous tissue over the ramus of the left mandible. A roughly spherical mass measuring 2.0 cm. in diameter was attached to the right carotid artery at its bifurcation. The carotid artery was partially enclosed by the mass which was lateral to it but did not appear to compress it. On cut surface it was firm, gray with red-brown streaks and spots, with a central, brownish, translucent, gelatinous portion. It appeared to be encapsulated.

Microscopically, it was a typical carotid body tumor.

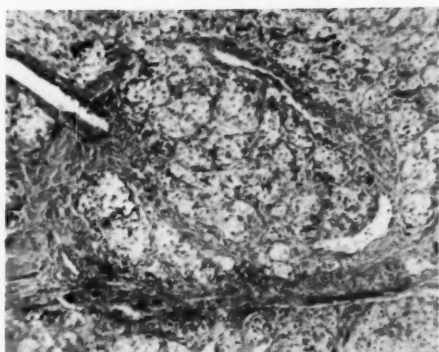


Fig. 3.—In a carotid body tumor of a dog (case 1), division of cells into small groups is aided by arteries. The peritheliomatous arrangement of cells with strands of material merging and connecting to the vessel walls is characteristic of this tumor (see also fig 4-C). H & E stain; x 74.

Attached to the surface of the pulmonary artery at its origin, and curling around it posteriorly and laterally, was a mass which was 4.0 by 2.0 by 2.2 cm. The lumen of the pulmonary artery appeared compressed by the mass. There did not appear to be any compression of the aorta or the left atrium, although the tumor was closely adjacent to both. On cut surface, the mass was soft, gray, encapsulated, and had numerous red-brown dots and streaks throughout. Microscopically, this was an aortic body tumor.

No other tumors were found in the dog. The heart had fibrosis of the left and right atrioventricular valve cusps, myocardial fibrosis, and myocardial necrosis with infiltration by monocytes and fat cells. There was thickening of small branches of the coronary arteries, due to medial hypertrophy, with some intimal thickening and calcification of the media of a large branch. Bronchitis, emphysema, fibrosis, and calcification of alveolar septa were present in the lungs, and a large calcified lesion, which appeared to be a calcified thrombus, was found in a pulmonary artery. Subacute enteritis of the small intestine, cystic hyperplasia of the gallbladder, congestion and hemorrhage of the adrenal cortex, congestion of the spleen and kidneys, and subacute interstitial nephritis were other findings.

Case 3.—An extremely obese, male Boston Terrier, 15 years old, was first examined because of labored breathing and progressive abdominal enlargement of 6 months'

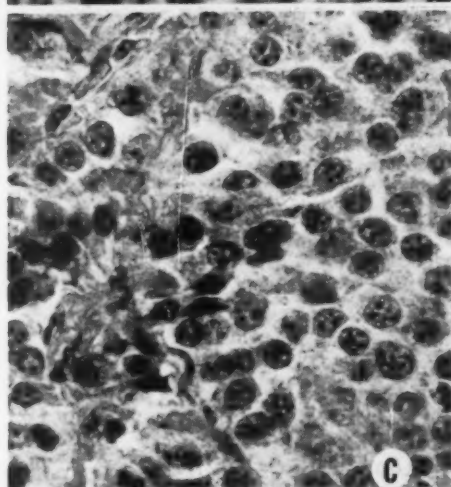
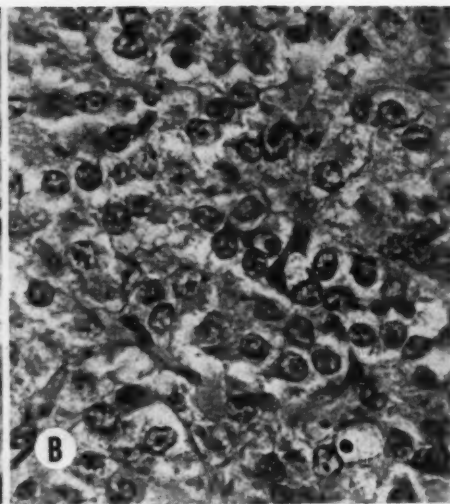
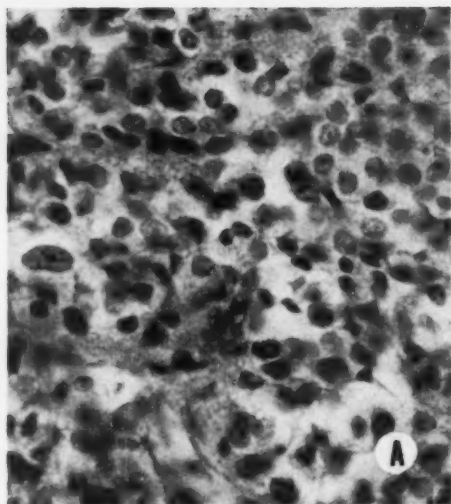


Fig. 4—Cellular detail is similar in the carotid body tumors of the 3 dogs (case 1-A; case 2-B; case 3-C). Notice the pale abundant cytoplasm, pleomorphic nuclei, usually single nucleolus, and scattered large nuclei. H & E stain; $\times 550$.

duration. The liver and external lymph nodes were enlarged on palpation. Nodes in the submaxillary region seemed particularly large. Abdominocentesis failed to yield peritoneal fluid. No auscultatory or electrocardiographic signs of heart disease could be detected.

The dog had become increasingly weak and dyspneic, and he was moderately cyanotic when returned 10 days later for radiographs and further electrocardiographic study. On palpation of the precordium, a pronounced cardiac impulse on the right and a weak impulse on the left were noticed. An electrocardiogram recorded frequent atrial extrasystoles. Slight enlargement of the right side of the heart, pulmonary congestion, and a widened anterior mediastinal shadow were seen in

radiographs of the chest, and a greatly enlarged liver, in a radiograph of the abdomen. Because of the dog's advanced age and the seemingly poor prognosis, he was euthanatized.

At postmortem, the abdomen was bulging and externally firm. On internal examination, a large quantity of abdominal omental fat was found. Attached to its ventral surface and partially enclosing the left carotid artery at its bifurcation was a mass measuring 3.0 by 2.5 by 3.0 cm. On cut surface, the mass was gray with red-brown streaks and dots. Centrally, the tumor became gradually browner, translucent, and gelatinous. The lumen of the carotid artery did not appear compressed. Microscopically, it was a typical carotid body tumor with evidence of cellular invasion of the connective tissue capsule and cells in the lumen of vessels (fig. 5).

At the heart, posterior to the pulmonary artery and the aorta, was a mass measuring 4.0 by 2.0 by 2.5 cm., bounded on its posterior surface by a left atrial wall which was displaced and forced into the atrial chamber. The mass also compressed the right atrium, extended dorsally over the right atrial appendage, and in this region enclosed approximately two thirds of the aorta or pulmonary artery. The cut surface was dull gray with numerous scattered red-brown streaks and dots. About one third of the cut surface was tan. This area was

immediately posterior to the pulmonary artery and microscopically was a typical aortic body tumor.

In the tan portion of the tumor, the pattern of the cells was more regular and less divided by bands of connective tissue than in the gray area. There were numerous blood vessels, and the cells did not vary in appearance in the 2 grossly different colored areas. Other postmortem findings were bronchopneumonia; focal hyperplasia of the pancreas; necrosis, congestion, and fatty metamorphosis of the liver; subacute nephritis; fibrosis of the left atrioventricular valve cusps; and cloudy swelling, with variations in staining quality, of myocardial fibers. Numerous small branches of the coronary artery were medially thickened.

Discussion

Of the total of 8 carotid body tumors in dogs now reported, 5 were in Boston Terriers and 2 were in Boxers. This high incidence in brachycephalic breeds is also true for aortic body tumors. Six of the 8 dogs were males. All, with the exception of a Cocker Spaniel, 30 months old, were over 8 years old.

In spite of the simultaneous occurrence of carotid and aortic body tumors in 4 of the 8 dogs, the metastatic origin of either is doubtful. Certain aortic body tumors have been shown to be malignant and to have metastasized, but selective metastasis to the carotid body or bifurcation of either carotid artery is not compatible with existing knowledge concerning tumor metas-

tasis. Invasion of the capsule and arterial lumen was present in the one dog (case 3), but there were no tumors indicating metastasis had taken place.

The first dog described had a left carotid body tumor and complete atrioventricular heart block. Unfortunately, no experimental procedures were attempted on this dog and demonstration of a relationship between the carotid body tumor and the heart block is lacking. The second dog had a supraventricular tachycardia of undetermined origin. Conceivably this could have been induced by autonomic nervous system effects. The third dog had dyspnea and cyanosis, and had clinical signs of enlargement of the right side of the heart (displacement of the cardiac impulse to the right precordium) and atrial myocardial disease (frequent atrial extrasystoles). Hepatomegaly was indicative of congestive heart failure in this case. All cardiac signs in this dog can be related to the mechanical effects of the aortic body tumor. Several possible causes of respiratory difficulty were present. The obesity and enlarged liver may have interfered with the movement of the diaphragm. The aortic body tumor compressed both atria and may have interfered with efficient pulmonary circulation. The presence of patches of bronchopneumonia also interfered with ventilation. That the carotid body tumor had any significance in the production of the respiratory difficulty is doubtful.

Conclusions

Difficulty in clinical recognition has precluded development of precise diagnostic tests and evaluation of functional effects of these tumors. A mass in the subcutaneous tissue near the angle of the mandible, particularly in old brachycephalic dogs, should suggest possible carotid body tumor. The presence of cardiac arrhythmias which may be produced reflexly through influences on the vasomotor and cardioregulatory centers, and which can not be explained on other bases (*e.g.*, aortic body tumor), may be supportive evidence, although experimental or adequate clinical evidence of this is lacking. The high incidence of aortic body tumors occurring concomitantly should be considered also since aortic body tumor may be more easily detected. Aortic body tumor may cause signs of subcutaneous edema of the anterior or posterior half of

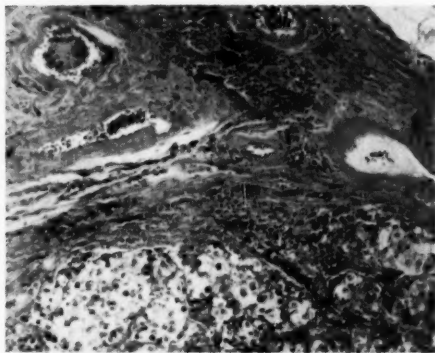


Fig. 5—Invasion of the connective tissue capsule and small blood vessels by carotid body tumor cells (case 3). Masson's trichrome stain; $\times 75$.

the dog, ascites, radiographic findings of increased density of the anterior mediastinum, and pericardial effusion resulting in cardiac tamponade. The presence of atrial arrhythmias in dogs with other signs of aortic body tumors may indicate invasion or damage to the atrial wall.

Summary

Carotid body tumor in dogs is rare and easily overlooked clinically. Experimental evidence of increased vagal tone or other autonomic nervous system effects of any tumors of the chemoreceptor system is lacking. Some general considerations to aid in diagnosis are the relatively high incidence in old brachycephalic dogs and frequent simultaneous occurrence of aortic body tumors. The presence of a palpable mass in the subcutaneous tissue of the neck may further indicate carotid body tumor.

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Screwworms Found in Alabama

The discovery on August 31 of a single infestation of screwworms in Geneva County, Alabama, in a beef steer shipped from the Southwest has prompted livestock growers and state and U.S. Department of Agriculture authorities to take a number of precautionary measures. The infestation represents the easternmost case that has been reported since the last screwworms were found in central Florida in June, 1959.

All other animals in the Geneva County stockyards where the screwworms were discovered were inspected and found free of the pest. State and federal livestock inspectors began a careful search immediately for signs of additional screwworm infestation to livestock within the vicinity. Nearby growers have been asked to notify inspectors when they plan to ship animals from their farms and ranches.

Canine Paragonimiasis

in Arkansas

Thayne R. SHORT, B.S., D.V.M.
Thayer D. HENDRICKSON, B.S.A., D.V.M.

A FEMALE PUP, 3 months old, of mixed breeding was examined as an emergency case after having had progressive dyspnea for 3 days.

The dog had no clinical signs of disease other than respiratory difficulty and an unusual "wind" sound in the right ventral portion of the rib cage. Respiration was aggravated when either the forelegs or hindlegs were elevated. There was no history of immunization or of trauma, and no worm eggs were found in the stool. The pup had the following hemogram: hematocrit value, 38 per cent; w.b.c. count, 7,500; and sedimentation rate, normal.¹

Two radiographs were taken. In a lateral right-to-left view, a frayed area of increased density was seen extending dorsal and posterior from the heart shadow (fig. 1). The same area in a ventrodorsal view appeared to be near the center of the thorax toward the right of the heart shadow (fig. 2). This located the lesion in lung tissue above and to the right of the heart.

In view of the results of the blood tests and the atypical pneumonic signs, *i.e.* no fever, leukocytosis, or general debilitation, the diagnosis was virus pneumonia. However, the dog died a few hours after radiography, and necropsy was performed. The only gross pathologic findings detectable involved the cardiac lobe of the right lung. One large cyst about 3 cm. in diameter was found in the middorsal portion of this lobe. The shadow of this cyst was observed dorsal to the heart shadow in a lateral radiograph (fig. 1-B), and is indicated by an arrow in the ventrodorsal view (fig. 2).

Pathologic Findings

Grossly, the lung contained a dark, red-brown, soft cyst approximately 2 by 3 by 2 cm. On section, the cyst contained dark, red-brown viscous material and appeared to be located around a dilated bronchus in which 2 trematodes were found.* The trematodes measured 5 to 7 mm. in length and 3 to 5 mm. in width; they were recognized as *Paragonimus* sp. Examination of the ova suggested *Paragonimus westermani*.

The lung tissue forming the wall of the cyst was collapsed and fibrosed; it contained areas of old and new hemorrhage and granulomatous type of reaction. The bronchi were distended and some contained mucinous material and chronic inflammatory cells. No sections of parasites were present.

It is evident that a secondary pneumonitis extended from the primary cyst and contributed to an early death, probably due to absorbed bacterial toxins. Bacteria do not normally establish themselves in healthy lung tissue, but in this case a favorable medium of inflammatory and necrotic tissue due to the presence of the flukes encouraged bacterial localization in the lung.⁵ Had the dog survived longer, true signs of pneumonia probably would have developed, especially an elevation in body temperature.

It is considered that *Paragonimus kellicotti* is the adult fluke infecting dogs and cats, whereas *P. westermani* is the adult fluke infecting man. They are morphologically indistinguishable in the adult stages and some workers believe that they are identical.³ One method of possible differ-

The authors are in small animal practice in Little Rock, Ark.

*Dr. Ted Yerasimides, veterinary pathologist, University of Arkansas Medical Center, Little Rock, performed the pathologic examination.



Fig. 1—In a lateral right-to-left radiograph of the thorax of the pup, the heart shadow (A), cyst (B), and area of increased density (C) are visible.

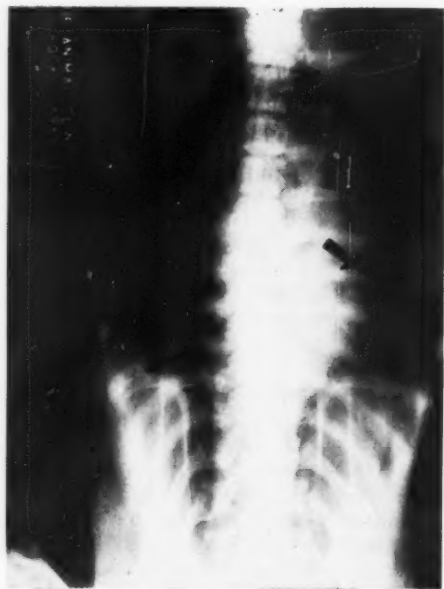


Fig. 2—Cyst wall (arrow) is seen in ventrodorsal radiograph of the thorax of the pup.

entiation concerns location of the metacercaria which are usually encysted in the cardiac region of the crayfish in the case of *P. kellicotti*, whereas they are scattered through the soft edible parts of the body in the case of *P. westermanni*.² These locations probably account for the fact that man is usually infected with *P. westermanni*.

Two intermediate hosts are required for the maturation of this fluke. The amphibious snail, *Pomatiopsis lapidaria*, acts as the first intermediate host; however, at the time of this writing, all efforts to positively confirm the presence of this species of snail in Arkansas have failed. On the other hand, the second intermediate host can be one of several species of crayfish, which are common in Arkansas. The owner of the dog in this case insisted that the dog had never been outside of the Little Rock area, thus we assume that both intermediate hosts occur in Arkansas. There is a possibility, however, that the dog could have gained access to infected crayfish which had been brought in from another state. Crayfish are sometimes used as fish bait in this area. The time from

ingestion of an infected crayfish to occurrence of signs of paragonimiasis takes 5 to 6 weeks, and a dog owner could easily forget details or be inaccurate in relating the true history.

As far as can be determined, this parasite has not been previously reported in man or other animal in Arkansas.^{2,4,6}

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Tumors and Tumor-like Lesions of Snakes

James R. WADSWORTH, V.M.D., M.S.

TUMORS of reptiles have been considered exceedingly rare.³ Few malignant neoplasms of snakes had been encountered until nearly a half century ago. The principal tumor types found in warm-blooded vertebrates, including man, have been observed in cold-blooded species. A few neoplasms of snakes have been described within the past decade.^{1,2,4,5}

Tumors of snakes are essentially similar in structure to corresponding growths in both mammals and birds; however, reptilian neoplasms are encountered less often. Decreased chances of survival by a tumor-bearing individual may account for the apparent rarity of neoplasms observed in wild snakes. This report deals with a few tumors and tumor-like growths examined by the author.

Two water moccasins were submitted for study. One had a spherical, white, fibrous mass approximately 1 cm. in diameter attached to the lateral border of the

lower left mandible. It was killed to permit removal and identification of the growth. On histologic examination, it was seen to be a squamous cell carcinoma. The other snake had 2 adjacent masses, each approximately 1.75 cm. in diameter, attached to the right lateral aspect of the neck immediately posterior to the head. These lesions proved to be granulomata and not true tumors.

A South American rat snake had a swelling adjacent to the head after a year in captivity. The right eye was obliterated by a yellow tumor mass measuring approximately 1 cm. in diameter. On histologic examination, a diffusely growing tumor was found infiltrating the head in the area of the eye. Focal fibrosis, necrosis of the bony structures, and some inflammation were evident. The tumor did not originate from the eye; no definite site of origin was found. This growth consisted of regular, moderate-sized, round cells with uniform, pale nuclei. Occasional mitotic figures were observed. There were no pseudoglandular spaces, nor other clues to indicate its type. Origin was probably nervous tissue or the

¹ From the Department of Pathology, University of Vermont and State Agricultural College, Burlington.

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reticuloendothelial system, not the epidermis.

A female African cobra had several enlargements on her body—a condition not uncommon in snakes. It is often due to multiple abscesses. One of the swellings, firmer than the others, was located just posterior to the snake's head. Necropsy revealed no significant, gross, visceral pathologic findings. The gray, firm, encapsulated mass contained a central portion of brown tissue. When examined histologically, it was seen that the lesion had a central core of caseous necrosis surrounded by an incomplete connective tissue capsule. Many interlacing hyphae-like elements were observed in the peripheral portions,

some of which had spore formation. These organisms were gram-positive. The caseous necrosis and morphology of the organisms suggested infection with *Actinomyces* species.

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Regulations to Prevent Drugs from Occurring in Milk

The Food and Drug Administration has published new regulations to prevent the occurrence in milk of antibiotics and other drugs administered to dairy animals (effective Nov. 29, 1960).

Under the regulations, such drugs may not be marketed for treatment of milk-producing animals if residues can be found in the milk more than 96 hours after administration of the drug, or if the time of disappearance of the drug from the milk has not been determined.

The new regulations also bring all dosage forms of permitted drugs except products for infusion into the udder under requirements for label statements calling for discarding the milk for 96 hours, or whatever shorter period has been shown to be adequate to assure that the milk is free of the drug. A previous regulation requires similar labeling for certifiable antibiotics for intramammary infusion.

Today's action follows a proposal published April 12, 1960, which would have limited the action to certifiable antibiotics for intramuscular or intravenous injection. As a result of comments on the proposal, coverage of the regulation has been extended to all drugs and all dosage forms (except intramammary infusions) intended for use in animals producing milk for food use.

The new regulation was made necessary by recent findings that injectable antibiotics and certain other drugs and other dosage forms, as well as the intramammary infusion products, result in contamination of the milk of the treated animal.—*Fed. Reg.*, Aug. 31, 1960.

Sinusitis in Turkeys

with Tylosin Tartrate

E. E. OSE, M.S.
L. E. BARNES, D.V.M., M.S.

THIS REPORT presents the findings from a series of trials in which young turkeys with infectious sinusitis were treated with the antibiotic, tylosin tartrate. All trials utilized experimental infections with pleuropneumonia-like organisms (PPLO) except one in which the infection occurred naturally.

Materials and Methods

The procedures used in these trials are described in detail in a previous paper¹ and only the variations will be mentioned here.

The strains of PPLO used to infect turkeys were No. 295 (S-6, Adler, California), No. 540 (PM-18, Osborn, Minnesota) and No. 2453 (734, Hofstad, Iowa). The cultures were propagated in embryonating chicken eggs and 0.5 ml. of yolk sac material was injected into each turkey sinus for each infection. The turkeys used in various experiments ranged from 4 to 9 weeks of age at the time of PPLO inoculation.

For experiments 1, 3, and 4, the turkeys were raised in isolation from 1 day of age and were inoculated when 4 weeks old. Those in experiment 2 were obtained from a commercial flock at 2 weeks of age and developed infectious sinusitis, naturally. Tylosin therapy was administered 2 weeks after experimental PPLO infection. Tylosin tartrate, as an aqueous solution, was injected in 1-ml. amounts directly into the sinuses without prior drainage of exudate. Dosages ranging from 1 to 75 mg. were tested. The properties of this antibiotic have been described elsewhere²⁻⁴ in detail.

Tylosin tartrate is soluble in water in amounts greater than 300 mg./ml., and it is soluble in certain organic solvents. It is stable in aqueous solution (pH 4.0 to 9.0) for at least 1 month at room temperature. It is relatively nonirritating on injection in turkeys, chickens, mammals, or on dust inhalation by chickens. The antimicrobial spectrum of tylosin has been described as essentially gram-positive, together with activity against certain large viruses. It has activity against 2 spirochetes, *Borrelia novyi* and *Leptospira pomona*; a mouse pinworm, *Syphacia obvelata*; and a species of avian coccidia, *Eimeria tenella*.

From Eli Lilly and Co., Agricultural Research Center, Greenfield, Ind.

The authors acknowledge the assistance of G. Brinkman, M. G. Richmond, M. Moore, and M. Bratton.

Results

Experiment 1 (PPLO Strain 295).—Fifteen turkey serums collected at random prior to PPLO infection were negative for PPLO hemagglutination-inhibition (HI) antibodies; 15 tracheal swabs taken at the same time failed to yield PPLO upon culture. At the time of treatment, 2 weeks after infection, 9 of 18 turkeys were positive for PPLO HI antibodies and 6 of 18 tracheal cultures were positive for PPLO.

Sinus swelling subsided within 2 weeks after treatment with tylosin tartrate, 6 mg./sinus; no recurrence of swelling occurred within 4 weeks (table 1). No evidence of irritation from tylosin was observed in any of these experiments, even at dosages as high as 75 mg. per sinus.

Sixteen of 18 serums collected at the termination of the experiment contained PPLO HI antibodies. PPLO were cultured from 1 of 6 swollen sinuses from the control group 4 weeks following treatment, and none were isolated from 5 nonswollen ones from the treated group.

Experiment 2 (Natural Infection).—All of 25 serum samples, taken 4 weeks after initial clinical signs were seen, were positive for PPLO HI antibodies. Six of 39 tracheal swabs collected at the same time were positive for PPLO although many cultures were contaminated.

Sinus swelling completely subsided following tylosin tartrate treatment (table 1). PPLO were isolated from 2 of 6 control turkeys and from none of 9 treated turkeys at the termination of the experiment. All of 19 serum specimens collected at the termination from representative turkeys in each group were positive for PPLO HI antibodies.

Experiment 3 (PPLO Strain 540).—Tracheal swab specimens cultured from 8 turkeys before infection were negative for

PPLO. Six of 14 sinus exudate cultures, made 2 weeks after infection, were positive for PPLO, and 8 of 8 serums were positive for PPLO HI antibodies.

Decrease in sinus swellings followed tylosin treatment (table 1) of 1 mg. per sinus.

Four weeks after treatment, the serums from 2 turkeys of each group of 18 were positive for PPLO HI antibodies. PPLO isolations were made from 2 of 6 sinuses treated with 4 mg. of tylosin, and from 1 of 5 nonswollen sinuses that had been treated with 1 mg. Sinus exudate cultures from 7 control turkeys were negative.

Experiment 4 (PPLO Strain 2453).—Tracheal swabs were negative for PPLO and blood specimens were negative for PPLO HI antibodies when collected from 20 turkeys just before PPLO infection.

Sinus swellings associated with infectious sinusitis induced with PPLO strain 2453 completely subsided following treatment with tylosin tartrate at 1 and 4 mg. per sinus. PPLO were not isolated from turkeys of any group at the termination of the experiment. Serum samples taken from

5 turkeys of each group of 20, 4 weeks after treatment, were positive for PPLO HI antibodies.

Discussion

Sinus swellings associated with infectious sinusitis of turkeys are markedly reduced following treatment with tylosin tartrate. Sinus swellings were present in 72 to 100 per cent of the turkeys when they were treated 2 to 4 weeks following PPLO infection. In all treatment groups except one, sinus swelling completely subsided by 4 weeks following treatment. Control turkeys (not treated) in each experiment maintained a high degree of sinus swelling throughout the experiment. Moreover, turkeys inoculated with PPLO strain 2453 responded to tylosin treatment as well as those infected with the 3 other PPLO strains. In earlier studies, erythromycin had been only slightly effective against PPLO strain 2453.¹ Tylosin was effective at dosages of approximately one tenth to one fiftieth as much as erythromycin against the same PPLO strains. While erythromycin

Table 1—Treatment with Tylosin Tartrate of Young Turkeys with Experimental PPLO Sinusitis

| Exper. No. | Infective PPLO strain | Tylosin level per sinus | No. of turkeys | Sinus swelling | | |
|------------|-----------------------|-------------------------|----------------|----------------|----------|--------------------|
| | | | | Time in weeks | Per cent | Change in per cent |
| 1* | 295 | Infected control | 24 | 0 | 92 | |
| | | | | 2 | 88 | |
| | | | | 4 | 59 | |
| | | | | 0 | 92 | -33 |
| 2** | 295 | 6 mg. | 24 | 2 | 0 | |
| | | | | 4 | 0 | |
| | | | | 0 | 0 | -92 |
| | | | | 2 | 0 | |
| | Natural infection | Infected control | 15 | 0 | 87 | |
| | | | | 2 | 79 | |
| | | | | 4 | 93 | +7 |
| | | | | 0 | 87 | |
| 3† | 540 | 6 mg. | 15 | 2 | 15 | |
| | | | | 4 | 0 | |
| | | | | 0 | 0 | -87 |
| | | | | 2 | 0 | |
| | 540 | Infected control | 18 | 0 | 76 | |
| | | | | 2 | 100 | |
| | | | | 4 | 100 | +28 |
| | | | | 0 | 72 | |
| | 540 | 4 mg. | 18 | 2 | 20 | |
| | | | | 4 | 7 | |
| | | | | 0 | 72 | -65 |
| | | | | 2 | 13 | |
| 4† | 2,453 | 1 mg. | 18 | 4 | 0 | |
| | | | | 0 | 72 | |
| | | | | 2 | 13 | |
| | | | | 4 | 0 | -72 |
| | 2,453 | Infected control | 20 | 0 | 100 | |
| | | | | 2 | 100 | |
| | | | | 4 | 100 | 0 |
| | | | | 0 | 100 | |
| | 2,453 | 4 mg. | 20 | 2 | 15 | |
| | | | | 4 | 0 | |
| | | | | 0 | 0 | -100 |
| | | | | 2 | 100 | |
| | 2,453 | 1 mg. | 20 | 4 | 5 | |
| | | | | 2 | 0 | |
| | | | | 0 | 100 | |
| | | | | 4 | 0 | -100 |

*Turkeys were infected at 9 weeks of age and treated 2 weeks later. **A naturally occurring sinusitis, also observed in the parent flock, was first observed about 1 month prior to therapy. †Turkeys were infected at 4 weeks of age and treated 2 weeks later.

produced a transitory irritation, tylosin produced no detectable irritation.

Conclusion

The antibiotic, tylosin tartrate, was an effective, nonirritating treatment agent in 3 groups of turkeys experimentally infected and one group naturally affected with infectious sinusitis. It was injected at dosages ranging from 1 to 6 mg. per sinus.

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"Separated Wall" in Sheep

A condition known as "clover burn" or "separated wall" has been recognized in Australian sheep for many years. It is characterized by marked overgrowth of hoof with early separation of the outer horny layer working up from the sole to the coronet. Soil and feces accumulate in the cleft produced by separation of the wall and eventually lameness occurs.

The syndrome is associated with thick pastures and wet conditions.

Effective treatment consists of paring out affected cavities and removal of sheep to drier conditions.—*Austral. Vet. J.*, 36, (1960): 23.

Scrapie Transmitted Experimentally

Brain suspensions prepared from each of 5 Swaledale sheep naturally affected with scrapie produced the disease in 7 of 25 Cheviot sheep and in 2 of 10 goats inoculated intracerebrally.

Suspensions of pituitary gland, adrenal gland, spleen, pancreas, and liver from a scrapie-affected goat produced scrapie when inoculated intracerebrally into other goats, but incubation period and the "take" within a 24-month period of observation varied according to the suspension used.

Comparison of intracerebral and subcutaneous routes of inoculating scrapie brain suspension into goats in groups of 10 showed a significantly longer incubation period in the animals injected subcutaneously.

Twenty-eight noninoculated goats housed in a scrapie environment over periods varying from 24 to 34 months have shown no evidence of disease.—*J. Comp. Path. & Therap.*, 70, (April, 1960): 192.

Neoplasms

from Captive Wild Species

James R. WADSWORTH, V.M.D., M.S.
Weaver M. WILLIAMSON, D.V.M.

NOTABLE contributions have been made to the study of neoplasia in wild mammals and birds.^{1,2,6,13} Numerous case reports describing tumors in zoo species have appeared in the literature in recent years.^{3-5,7-12} The purpose of this report is to present a description of a few neoplasms identified in captive wild species.

Reticulated Giraffe

A male giraffe (*Giraffa camelopardalis*), 3 years old, did not respond to treatment for whipworms and strongyles, and died.

At necropsy, he was thin and the right side of his body had denuded areas which may have resulted from struggling. The eyes were sunken, and the thyroid glands appeared enlarged. The left thyroid lobe weighed 505 Gm. and measured 17.8 cm. long, 8.9 cm. thick, and from 8.0 to 2.5 cm. wide (fig. 1). These measurements indicate that the gland was at least 10 times normal size. Small, rounded elevations were uniformly distributed over the surface of the organ. Three of these were dark purple and larger than the others. The right lobe was similar to the left. On histologic examination, enlarged follicles were found filled with colloid and lined by flattened epithelium. Occasional epithelial, papillary projections protruded from the walls of the follicles. The condition was diagnosed as colloid goiter. Review of the literature



Fig. 1—Left lobe of thyroid gland from a giraffe is estimated to be 10 times normal size.

failed to disclose any references to endocrine diseases of the giraffe.

Babiroussa

A female babiroussa (*Babirussa alfurus*), 21 years old, became depressed and had congested mucous membranes of the conjunctivae and mouth prior to her death. Moist râles of the lungs with areas of consolidation had also been evident. She was thin, especially in the hindquarters. Ter-

Dr. Wadsworth is extension animal pathologist, Department of Animal Pathology, University of Vermont and State Agricultural College, Burlington; Dr. Williamson is veterinarian, Chicago Zoological Park, Brookfield, Ill.

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minal pneumonia with secondary complications was believed the cause of death.

At necropsy, the lungs contained areas of yellow-white pus and the bronchi were greatly thickened. Both lungs appeared whitish, with connective tissue proliferation and some emphysema. The spleen had several round, yellowish, superficial areas resembling scar tissue. The left uterine horn contained a large quantity of viscous, yellow-white creamy material. A considerable amount of serum-like fluid filled the abdominal and thoracic cavities.

A portion of the lungs was examined for possible neoplasia. Focal fibrosis, scarring, and marked chronic inflammation of the bronchi were evident. Scattered throughout the lung section were nests and intravascular aggregates of tumor cells. These consisted of large, malignant cells having vacuolated cytoplasm. At one point, a nest of these cells had ruptured into a bronchus. It was not possible to determine the exact origin of the tumor, but lungs or gastrointestinal tract seemed likely possibilities. Adenocarcinoma of the lung was diagnosed.

Kodiak Bear

No clinical signs were seen in a male Kodiak bear (*Ursus middendorffi*) prior to death. However, at necropsy, the liver was greatly enlarged; it weighed 45 lb. and measured 23 x 15 x 8 inches. Its surface was dark red with reticulated markings, corresponding to the distribution of the blood vessels and borders of the lobules. Numerous rounded elevations protruded from the surface of the organ, varying from the size of a pinhead to 4 inches in diameter. These masses were sharply defined and distinct from adjacent liver substance, mottled gray to red, and had almost liquid centers.

Enlarged glomeruli, as well as marked congestion, were found upon histologic study of the kidneys. Extensive degeneration had involved the renal cortex. Hyaline changes resulted in deterioration of the normal renal architecture. There were marked hemolysis in the larger vessels of the spleen, a few areas of focal granulomatous change, and no distinct evidence of metastases. No metastatic nodules were observed in the lungs.

The section of liver studied was almost entirely tumor. Its capsule was thickened

and had areas of both old and recent hemorrhage. Cords of uniform cells, closely resembling normal liver cells, had replaced the normal hepatic parenchyma. The normal architecture of the liver was destroyed, and occasional bizarre giant cells were observed. Neither central veins nor portal zones could be distinguished. Hepatoma was diagnosed.

Yellow-Headed Parrot

An adult, male yellow-headed parrot (*Amazona ochrocephala atrix*) died without previous signs of illness. At necropsy, a tumor, approximately 2 inches in diameter, was found in the abdomen. The liver was white and enlarged.

On histologic studies, small, uniform, round cells were observed growing along delicate fibers of the tumor. Mitoses were rare. The mass was encapsulated, but tumor cells had not penetrated the capsule. The diagnosis was lymphoma.

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Vomiting in Animals

William C. DOLOWY, M.S., D.V.M.

Lester E. FISHER, D.V.M.

Weaver WILLIAMSON, D.V.M.

VOMITING is defined as the forcible expulsion of the contents of the stomach through the mouth.^{2,3} The stomach is not essential to vomiting in all species; for example, gastrectomized dogs vomit.⁵

Description

In the cat, after administration of apomorphine, vomiting begins with inhibition of the cardiac end of the stomach by deep contractions beginning in the midregion and sweeping toward the pylorus. A strong contraction at the incisura angularis divides the gastric cavity into 2 parts. The stomach is completely relaxed on the cardiac side of this constriction, but waves continue running over the vestibule on the pyloric side. Then sudden contractions of the diaphragm and abdominal muscles cause ejection of the gastric contents into the esophagus and through the mouth with the glottis closed.¹

Mechanism

The central mechanism of vomiting resides in the dorsolateral border of the lateral reticular formation, including the tractus solitarius and its nucleus. This was proved when electrical stimulation of this region elicited vomiting, and destruction of this region caused cats to be highly refractory to vomiting by high doses of apomorphine and copper sulfate.⁷

Stimuli

Sensory nerve endings of the fauces and the pharynx are the most sensitive regions

to touch to elicit vomiting. Afferent impulses from the duodenal mucosa are next most potent in initiating the action; impulses from the stomach are third. Intestinal obstruction is an example of a mechanical stimulus.

Excitement, certain odors, apomorphine, copper sulfate, concentrated salt solution, or mustard water can induce vomiting. Apomorphine and copper sulfate act centrally; concentrated salt solution and mustard water, locally. Also, allergies to foods, uremia, or extensive burns may induce vomiting.

Viral and bacterial gastroenteritis is often accompanied by vomiting, and dogs in the late stages of pyometra frequently vomit.

Animals Which Vomit

Not all species vomit; generally, rodents do not and herbivorous animals do so only rarely. Carnivores and some species of omnivores do vomit.^{2,4}

Vomiting in the horse occurs occasionally, the vomitus being discharged through the nostrils. The action may be the cause or result of a concurrently ruptured stomach. Rabbits do not vomit, although they have been seen to retch without vomiting after being given injections of apomorphine.

Vomiting may occur in the domestic cow,⁴ although it is rare. Eructation for the purpose of cud chewing occurs in ruminants, but this does not constitute vomiting since the food is not ejected from the mouth. The abdominal muscles do not seem to play a part in this act.

Dogs, coyotes, wolves, and zorros (a type of fox) vomit, gastritis due to ingestion of spoiled food being the most common cause in dogs. Also, vomiting is common in cheetahs, jaguars, ocelots, and leopards.

Dr. Dolowy is the administrator of the Medical Research Laboratory, Chicago Professional Colleges, University of Illinois, Chicago; Dr. Fisher is with the Lincoln Park Zoo in Chicago, and Dr. Williamson, with the Brookfield Zoo in Chicago.

It is particularly severe in cats with infectious panleukopenia (distemper); however, vomiting occurs most frequently in cats to disgorge hair balls and after they have eaten green grass.

Vervet and rhesus monkeys, chimpanzees, baboons, and gorillas vomit. A gorilla will vomit readily without retching when tipped with its head below its stomach.

Guinea pigs, rats, mice, and hamsters apparently do not vomit. Elephants vomit when overheated and from septicemia.⁵

Camels, llamas, and guanacos vomit and spray the material at molesters as a defense mechanism. These animals are outstanding exceptions to other herbivores in their striking use of the vomiting mechanism.

Vomiting has been observed in a sea lion.

Herons vomit readily. Owls disgorge the hair and skeletons of ingested mice in this manner. Penguins and pigeons feed their young by vomiting partially digested food. The potoo bird, when force-fed and nervous, vomits readily.

A crocodile was seen to vomit hair upon arrival at the Lincoln Park Zoo; the hair was probably part of its last meal of wild game.

An egg-eating snake eats whole eggs, appears to break the shell within its gullet with the ventral side of its vertebrae, and then disgorges the shell. This is not true vomiting since the shell does not enter the stomach. Most snakes vomit for various reasons; rattlesnakes and pythons frequently vomit after being force-fed. (Self-

starvation is a major cause of death in snakes newly arrived at a zoo.) If snakes are force-fed during cold weather when their body temperature is low, the food will begin to rot before it is digested. The snake usually vomits, but frequently dies shortly thereafter. This phenomenon occurs in anacondas, boas, pine snakes, and rat snakes. Up to 48 hours after feeding, rattlesnakes and pythons can vomit a heavy meal when surprised by an adversary in order to make their escape easier.

In the fish and frog, which have no diaphragm, vomiting occurs by the activity of the stomach alone. Antiperistaltic waves carry the food through the cardia. This action is similar to vomiting by the human infant when, after eating an oversized meal, the child regurgitates excess fluid without apparent assistance of the diaphragm or abdominal muscles.

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Benefits of Artificial Insemination in Swine

Interest in swine artificial insemination keeps growing. Michigan State University, joining at least 9 other states, now is building facilities for research. Artificial insemination of swine will permit more breeders to make use of the efficient, fast-gaining, meat-type sires, thereby improving quality faster. Semen of older boars can be used on gilts or sows of any size. Furthermore, artificial insemination will tend to reduce spread of infectious diseases by eliminating the need for boars.

Last year Japanese farmers used artificial insemination on 40,000 sows. Norway, Sweden, Russia, and Great Britain also have active swine artificial insemination programs.—*Successful Farming*, 68, (1960): 8.

Predicting Success

in the Clinical and Preclinical Years

of Veterinary Medical School

Frederick G. BROWN, PH.D.

WITH THE continued emphasis on higher education, selection of students has become a problem to many schools and colleges. It is particularly crucial in professional schools such as those of veterinary medicine in which enrollments must necessarily be limited. Considerable amounts of time, equipment, and money are invested in each student, and the student cannot be replaced if he does not finish the program.

In the last decade, professional schools have increasingly used test batteries as an aid in selecting students. The purpose of these batteries is to provide data concerning the aptitude and achievement of the applicant that can be used in conjunction with other available information in determining who are the best-qualified students.

The purpose of this study was twofold: (1) to determine the effectiveness of the selection procedures used by the School of Veterinary Medicine at the University of Missouri, and (2) to compare the effectiveness of the selection data in predicting performance in the preclinical and clinical years.

Procedure

Subjects.—The subjects were 131 members of the classes 1956-1960 in the School of Veterinary Medicine. All had completed at least 2 years of veterinary school and 76 had completed all 4 years. Fifteen other students were eliminated from the analyses because of incomplete data.

For the analyses, the total group was subdivided into (1) the *clinical* group, which included only the 76 students who had completed all 4 years, and (2) the *preclinical* group, which included all 131

students, *i.e.*, all the students in the clinical group plus the 55 others who had completed at least 2, but less than 4, years of veterinary school. The reason for this split will be discussed.

Predictor Variables.—Two predictors were used. One was the student's grade-point average (GPA) for all his college work prior to entering veterinary school (pre-vet GPA). The second predictor was the combined (total) score on the Veterinary Aptitude Test (VAT) published by the Psychological Corporation. Part scores on the VAT were not used because, in a preliminary analysis, it was shown that they did not significantly increase prediction accuracy over the use of the combined score alone. Both predictors were available to the veterinary school admissions committee and were considered with other application information; however, no minimum scores on either variable were used in selecting the students to be admitted to veterinary school.

Criteria Measures.—Independent criteria were used for the clinical and preclinical groups. For the preclinical group, the criterion was the GPA made in the first 2, or preclinical years, of veterinary school. For the clinical group, it was the GPA obtained during the second 2, or clinical, years.

Two criteria were used because it was believed that they measure 2 distinct types of performance. The first 2 years of veterinary school are almost entirely formal academic and laboratory work. Of course, success in this portion of the program is prerequisite to further work in veterinary school and entrance into the profession; however, the content is much different than the day-by-day work of a veterinarian.

The second 2, or clinical, years provide a closer approximation to the working situation of a practicing veterinarian. The work is practical in nature, dealing directly with animals, although under supervision. It could be argued that success in this aspect of the training program is a better indication of the student's potential for becoming a successful practicing veterinarian than his performance in academic and laboratory courses.

Results

The data were analyzed by multiple correlation. This procedure considers the cor-

Dr. Brown is assistant director of testing and counseling services at the University of Missouri, Columbia.

The author thanks Dean A. H. Groth of the School of Veterinary Medicine, University of Missouri, Columbia, for his assistance in collecting the data, and Dr. William Owens for his helpful comments on the manuscript.

A longer, more technical report of this study is available from the author upon request.

relations between the predictors and the criterion and between the various predictors, and optimally weights the various predictors so they maximally predict the criteria (table 1). Both preclinical and clinical GPA's were predicted with consid-

to weight pre-vet GPA about twice as heavily as the VAT score.

Another important aspect of the study was that clinical performance was predicted as accurately as performance in the preclinical years. Much of the criticism that has been directed at psychometric selection procedures, especially those depending solely on ability and achievement measures, has concerned this point. Educators agree that the tests identify students who do well in academic and laboratory courses. On the other hand, they believe that the ultimate criterion is how the person does a job—in this case how good a practicing veterinarian he will be.

No direct measure of professional success was available for this study; however, performance in the clinical years of training is a closer approximation to, and a better indicator of, performance after graduation than is performance in the more academic work, *i.e.*, preclinical years. This study indicates that the test scores predict clinical performance (the approximation of professional success) as accurately as they predict academic performance. Thus, in using these selection procedures, students who can work well with animals and also are academically talented will be chosen.

Summary

Success in the University of Missouri School of Veterinary Medicine was predicted. Using preveterinary grade-point average and the combined score on the Veterinary Aptitude Test as predictors, the multiple correlation coefficients were 0.64 and 0.70 for the preclinical and clinical years, respectively. The results were interpreted as indicating that this selection procedure identifies the students who will work effectively in a clinical setting, as well as predicting success in the more formal, academic aspects of the training program.

TABLE 1—Correlations of Predictors with the Criteria

| Predictors | Preclinical GPA (n = 131) | Clinical GPA (n = 76) |
|-------------------|------------------------------|--------------------------|
| VAT | | |
| (combined score) | 0.48 | 0.55 |
| Pre-vet GPA | 0.58 | 0.66 |
| VAT + Pre-vet GPA | 0.64 | 0.70 |

erable accuracy ($R = 0.64$ and 0.70 , respectively). Surprisingly, the prediction was slightly better for the clinical GPA.

Discussion

Ideally, to validate the selection procedures, all applicants should be allowed to enter veterinary school, and cutting scores should be determined by contrasting the scores of students who complete the program with those of students who do not finish. Practically, this is not possible because of the limited facilities and, consequently, the limited number of students who can be admitted. Actually, because of the low attrition rate (less than 5%) in veterinary school, our best prediction is that once a student is admitted to the program he will complete it.

The correlations obtained, however, suggest that pre-vet GPA and scores on the VAT can be of great value in selecting the most promising applicants. That is, choosing the students who score highest on the VAT and who have the best grades for preveterinary work will give the best qualified group of students. The optimum procedure, at least at the University of Missouri, is

Feather Mites and Ornithosis

Ornithosis virus (*Miyagawanella* spp.) has been isolated from several species of poultry ectoparasites (such as lice and mites). These findings suggest that ornithosis may be a vector-borne infection.—*Science*, 132, (July 29, 1960): 300.

Editorial

Hospitality Suites Not Yet Dead . . .

At the recent AVMA convention at Denver, the exhibitors commendably abided by the spirit of the rule against hospitality suites (*see* editorial, June 15, J.A.V.M.A.).

There being no such suites in evidence, the conventioners satiated their thirst privately or at the many public facilities; they visited with their friends in hotel lobbies, at the convention hall, and at the social events; and, appropriately, they visited with commercial representatives at the exhibits. One gained the general impression that the night-long parties sponsored by exhibitor companies in crowded hotel suites had made a graceful exit from the scene of the national veterinary convention.

The final chapter, however, has not been written, for the issue was discussed on the floor of the House of Delegates meeting on August 13. During a lively discussion of the Executive Board's ban on hospitality suites, President Leasure, Board Chairman Anderson, Executive Secretary Kingman, and several delegates spoke in defense of the ban on use of hotel facilities for general entertainment purposes by exhibitors. Delegates opposed to this policy urged that the ban be reconsidered and that a plan be devised to permit operation of hospitality suites in a manner suitably reflecting the propriety and decorum of the profession. Final action was passage of a motion requesting the Board to reconsider.

Thus, before plans are completed for the Detroit convention in 1961, the Executive Board will again review the pros and cons of this problem. If the Board members decide that adequate policing can be accomplished, we may witness the advent of restricted hospitality. If they decide that their original ban was in the best interest of the Association and its national conventions, the ban will no doubt be continued at the Detroit meeting. The House could then concur or else take more decisive action at its next meeting.

Say It Better . . .

Not many have had occasion to consider critically the use of the verb *to inject*, either in speech or in writing. Once having done so, however, it's surprising how often one recognizes its erroneous use.

| Incorrect | Correct |
|--|---|
| Cattle injected intradermally with . . . | Cattle given intradermal injections of . . . |
| Mice injected with the virulent culture . . . | Mice inoculated with the virulent culture . . . |
| Injection of the pups with serum was the next step . . . | Injecting serum into the pups was the next step . . . |

A clear explanation of the proper use of this verb is difficult to achieve, but Fishbein's is satisfactory if studied carefully:

"The transitive verb 'inject' means (1) to introduce a substance into or (2) to distend or fill with fluid by injection. It is therefore incorrect to speak of injecting a patient with arsphenamine" or of "injecting a rabbit with virus." One "gives the patient an injection" and "injects the virus into the rabbit" or "inoculates the rabbit with the virus." It is permissible, however, to say that one "injects the bronchi" or "injects the blood vessels of a cadaver" when one actually fills the structures with a contrast medium."

from the *Research Journal*

Growth of Dogs Fed Irradiated Beef

Nonirradiated beef or beef irradiated with 2.79 or 5.58 megarads was fed to dogs for 24 weeks. There was no significant difference in weight gains due to treatment, regardless of whether the weight gained by the dogs was or was not adjusted for differences in initial body weights. There was a significant decrease in food consumption, amounting to 504 and 995 Gm./megarep of irradiation at the end of 12 and 24 weeks, respectively.

There were no significant differences in erythrocyte, leukocyte, and differential counts or in hemoglobin content of the blood of dogs fed irradiated beef as compared to those fed nonirradiated beef.—[E. F. Reber, O. P. Malhotra, J. P. Kreier, H. W. Norton, and P. D. Beamer: *The Effects of Feeding Irradiated Beef to Dogs. I. Growth.* *Am. J. Vet. Res.*, 21, (May, 1960): 367-370.]

Resistance of Opossum to Rabies

Thirty-four opossums (*Didelphis marsupialis* var. *virginiana*) were inoculated with rabies virus recovered from a skunk (*Mephitis mephitis*) in Illinois or a fox (*Urocyon cinereoargenteus*) in Georgia, or the National Institutes of Health standard challenge virus. Virus was inoculated intramuscularly (masseter), intraocularly, intracranially, and into the nasal mucosa and turbinates. Four of the opossums developed a disease with signs of central nervous disturbance, but a trans-

missible agent, lethal for mice, was recovered from only 1. Negri bodies could not be seen in brain tissues of the opossums or mice in either hematoxylin-eosin stained sections or smears stained by the Williams method. These results suggest that the opossum has a high degree of resistance to rabies virus.—[P. D. Beamer, C. O. Mohr, and T. R. B. Barr: *Resistance of the Opossum to Rabies Virus.* *Am. J. Vet. Res.*, 21, (May, 1960): 507-510.]

Aspects of *Trichostrongylus axei* Infection

Nineteen sheep, 76 to 657 days old, were given *Trichostrongylus axei* larvae of equine origin; the l.d.₅₀ was 580,000 larvae. In the 7 sheep that died, the interval between infection and death was 20 to 97 days. In 12, the average prepatent period was 23.3 days. The male/female worm ratio was 0.57 for 12 animals.

Clinical signs evident at the 250,000 larval dose level were: (1) reduced feed and water consumption, (2) progressive cachexia, (3) weight loss, (4) listlessness, (5) loss of wool resiliency, and (6) progressive weakness.

Pathologic changes in the abomasal mucosa were first perceptible at the 50,000 lar-

val dose level and consisted of scattered, mildly hyperemic areas. With 250,000 or more larvae, the abomasal lesions ranged from extreme hyperemia to erosion of the mucosa. Ringworm-like lesions, similar to those first reported in the horse, were observed in 1 yearling. Large numbers of lymphocytes were observed infiltrating the abomasal mucosa and occasionally the submucosa.

An elevated packed red blood cell volume was observed 1 to 6 weeks after infection, but it dropped into the subnormal range if the animal survived beyond the ninth week post-infection.

Eosinophilia was observed 2 weeks after infection. It reached its highest level 4 to 8 weeks after infection, then dropped to within normal limits.

A strong immunity to massive challenging doses of larvae followed recovery from initial infection.

In this study, the equine strain appeared

to be less pathogenic for sheep than strains studied by others. — [S. E. Leland, J. H. Drudge, Z. N. Wyant, and G. W. Elam: *Studies on Trichostrongylus axei* (Cobbold, 1879), V. Some Quantitative and Pathologic Aspects of Experimental Infections with a Horse Strain in Sheep. *Am. J. Vet. Res.*, 21, (May, 1960): 449-457.]

Trichostrongylosis in Lambs

Acute trichostrongylosis (*axei*) was induced in 5 lambs by inoculation of 50,000 to 300,000 infective larvae of *Trichostrongylus axei*. Another lamb, inoculated with 500,000 infective larvae, was not as severely affected. The 5 lambs with acute infections died or were killed *in extremis*; the clinical effects were anorexia, acute diarrhea, emaciation, physical weakness, weight loss, dehydration, and terminal relative polycythemia. In the surviving lamb, most of these effects were less pronounced and a slight terminal anemia developed. At necropsy of the 5 lambs with acute cases, the blood was dark red and viscous and the abomasum and duodenum were enlarged and inflamed, but

in the surviving lamb these changes were less marked.

The numbers of adult worms recovered from these lambs at necropsy varied from 5,720 to 45,862, and were inversely related to the quantities of larvae given.

Erosion of the superficial mucosa, edema, hyperemia, and lymphocytic infiltration were seen histologically in the abomasum and duodenum. A few adult worms were seen in the glands and mucosal tissue.—[K. C. Kates and J. H. Turner: *Experimental Trichostrongylosis (axei) in Lambs, with a Discussion of Recent Research on this Disease in Ruminants*. *Am. J. Vet. Res.*, 21, (March, 1960): 254-261.]

New Books

British Small Animal Veterinary Association Congress Proceedings

This volume contains the papers read at the 1959 British Small Animal Veterinary Association Congress and the question-and-answer discussions that followed them.

Together these papers form a valuable and an interesting source of information on current progress in veterinary medicine. Apart from disease conditions in cats, dogs, and other small animals, the topics include practice administration, a country-wide fee survey, and symposium on unusual veterinary patients, as well as civil defense considerations.

Although the readability suffers slightly because the articles are almost verbatim reports of oral presentations and are principally directed at veterinarians in Great Britain, the general high quality of information, printing, paper stock, and binding more than make up for the shortcomings.—[*British Small Animal Veterinary Association Congress Proceedings 1959*. Edited by Bruce V. Jones. 164 pages; illustrated. Symposium Publications Division, Pergamon Press, New York, N.Y. Price \$8.50.]



New Section Officers to Plan Next Year's Convention Program Soon

After just settling down from a busy 97th AVMA Annual Convention in Denver, it's hard to believe that plans are already underway for next year's convention. But they are. The new AVMA section officers elected in Denver are already planning to meet in October to set the program for the 98th

AVMA Annual Convention next August in Detroit.

The scientific section officers elected in Denver are: Section on Research—Dr. N. H. Booth (MSU '47), Fort Collins, Colo., chairman; Dr. R. F. Langham (MSU '42), East Lansing, Mich., secretary. Section on Pub-

Opening Session, 97th Annual AVMA Convention in Denver



Participants in the Opening Session of the 97th Annual AVMA Convention in Denver were (seated left to right): Dr. H. E. Kingman, Jr., executive secretary, AVMA; Mr. Harry Miller, director, Gaines Dog Research Center; Drs. J. W. McLean, New Zealand Veterinary Medical Association; D. K. Detweiler, Philadelphia, Pa., winner, Gaines Award; David Luke, Royal College of Veterinary Surgeons, Belfast, Northern Ireland; H. H. Dukes, Des Moines, Iowa, winner, 1960 Borden Award; A. Constantin, Society of Veterinary Practitioners, France; L. P. E. Choquette, president-elect, Canadian V.M.A.; Gail H. Gilbert, general chairman, local committee; Mrs. H. J. Hill, chairman, woman's activities; Drs. E. E. Leasure, president, AVMA; Dan J. Anderson, chairman, AVMA Executive Board; Mrs. F. R. Booth, president, Women's Auxiliary; Dr. and Mrs. G. W. Ward, Australian Veterinary Association; Dr. W. A. Hagan, Ames, Iowa, winner, 1960 Twelfth International Veterinary Congress Prize; Mr. John McCain, Borden Company Foundation, Inc.; Drs. Reider Vollen, Veterinary Medical Association of Norway; Wilhelm F. Schaeffler, German Veterinary Association; C. E. DeCamp, New York, N. Y.; winner, 1960 AVMA Award; Shiro Miura, Japanese Society of Veterinary Science; C. T. Easley, Sulphur Springs, Okla., winner, 1960 Practitioner Research Award; and Mr. Thomas Millsack, manager of general services, City of Denver, representing the Mayor of Denver. Dr. S. F. Scheidy, AVMA president, is at the podium.

lic Health and Regulatory Veterinary Medicine—Dr. Asa Winter (MSU '21), Lansing, Mich., chairman; Lt. Col. L. J. Neurater (COL '44), Rockville, Md., vice-chairman; Dr. Winston M. Decker (MSU '46) Fairfax, Va., secretary. Section on Poultry—Dr. H. E. Adler (WSU '46), Davis, Calif., chairman; Dr. B. R. Burmester (MSU '51), East Lansing, Mich., secretary. Section on Small Animals—Dr. F. P. Sattler (OSU '54), Fullerton, Calif., co-chairman; Dr. Alfred G. Schiller (MSC '43), Urbana, Ill., co-chairman; Dr. Robert G. Schirmer (COR '46), East Lansing, Mich., secretary. Section on Large Animals—Dr. John W. Kendrick (COR '47), Davis, Calif., co-chairman; Dr. L. E. Boley (KSU '49), Urbana, Ill., co-chairman; Dr. Gabel H. Conner (WSU '41), East Lansing, Mich., secretary. The Section on Large Animals replaces the former Sections on General Practice and on Surgery and Obstetrics.

By January 1961, the section officers will have the program for the Detroit meeting in final shape and will have issued invitations to speakers. Any veterinarians who have suggestions to offer or would like to make presentations at next year's meeting must contact the section officers well before that time.

Dr. Arburua Urges AVMA Insignia Change

For 28 years, Dr. Joseph Arburua (SF '15), San Francisco, Calif., has been trying to correct an error for which he feels responsible—the adoption by the AVMA of an "inappropriate" insignia.

The insignia, a winged wand encircled by two serpents over which a large "V" appears, was adopted by the AVMA in 1922. Dr. H. B. Wintringham (SF '14), Lakeport, Calif., designed the insignia for the San Joaquin V.M.A., and Dr. Arburua supported its adoption by the AVMA then.

In 1932, they discovered that the winged wand was the symbol of Hermes or Mercury

who are in no way connected with medicine. Mercury is known as the messenger of the gods and the god of the highway and Hermes as the god of sheep robbers, shoplifters, and highwaymen. "This is certainly not the kind of image the veterinary profession ought to be linked with," Dr. Arburua says.

Drs. Arburua and Wintringham feel the insignia should be changed to carry the symbol of Aesculapius, the god of healing, and appeared before the House in 1933 and again in 1941 to try to correct the error in the symbol. During the 1941 debate, Dr. Wintringham appealed to the House to adopt the knotty rod entwined by a single serpent, the symbol of Aesculapius.

Dr. Arburua, who will retire from the AVMA Executive Board next August, made another try to correct the insignia at this year's AVMA convention. A resolution that the present caduceus be discontinued when the Executive Board develops a new one was introduced in the House of Delegates, but was tabled for further discussion.

110 Veterinarians Golf at AVMA Convention

A record-breaking 110 veterinarians teed off at the Lakewood Country Club near Denver to compete in the 1960 AVMA Golf Tournament August 15. Six veterinarians' wives entered competition.

The tournament was organized into two-man teams, both players from the same



Dr. Arburua addresses the House of Delegates to urge AVMA insignia change.



Dr. B. S. Burkhardt, co-chairman of the golf tournament, presents the AVMA trophy to Drs. Robert M. Stader and E. J. Kohler of Minnesota.

state, province, or territory. The team shooting the lowest combined score was Drs. Robert M. Stader and E. J. Kohler from Minnesota. They were awarded the AVMA Golf Trophy. The trophy travels to the state of each year's winners. Last year it was in Missouri when Drs. John W. Pierce and E. H. Haynie took the prize for having the lowest combined score.

In second place in the 1960 competition for lowest combined score were Drs. R. T. Albrecht and B. S. Burkhardt, Colorado, and in third place were Drs. H. R. Lancaster and J. J. Ridgway, California.

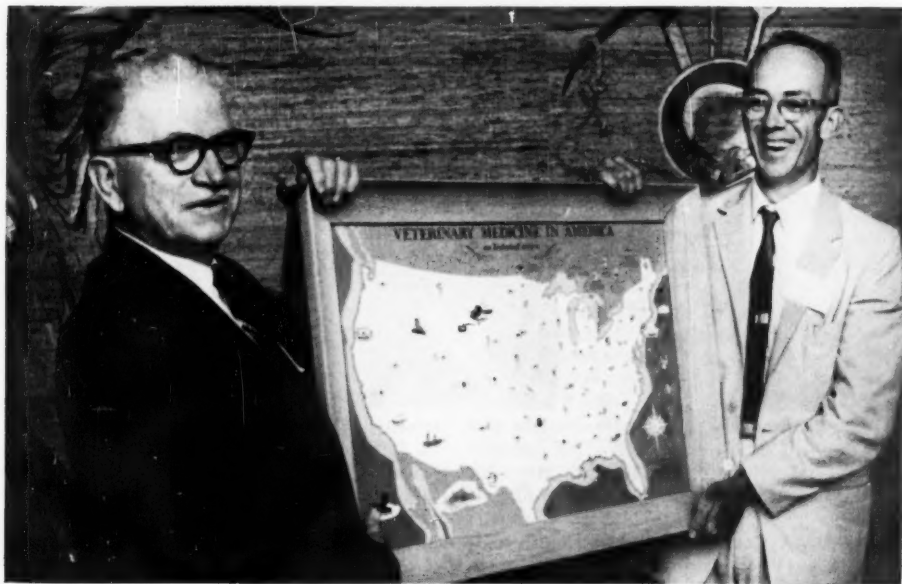
The Stader-Glenney Bowl, awarded for the lowest single gross score, was presented to Dr. B. S. Burkhardt. There's a catch to winning this prize, though—the winner must fill it with champagne! Dr. R. M. Stader was second in the low score competition; Dr. R. H. Hollis, third; Dr. J. W. Pierce, Missouri, fourth; Dr. E. H. Haynie, Missouri, fifth; and Dr. R. W. Hammermeister, Kentucky, sixth.

Mrs. Rose Roberts, Cleveland, Ohio, won the trophy in the women's competition.



Mrs. Rose Roberts of Cleveland, Ohio, accepts the AVMA women's trophy from co-chairman of the tournament, Dr. B. S. Burkhardt.

Dr. Smithcors Presents Map Showing Veterinary History



Dr. Elden E. Leasure (left), president, American Veterinary Medical Association, accepts illustrated map of the history of veterinary medicine in the United States from Dr. J. F. Smithcors, president, American Veterinary Historical Society, during AVMA's 97th Annual Convention. Edited by Dr. Smithcors, the map was produced under a grant by the veterinary division of the Schering Corporation, and will hang in AVMA headquarters in Chicago. It traces the development of veterinary medicine from the first importation of livestock into this country in 1537, to the present.

New AVMA Council Members Elected

Thirteen new members were elected to AVMA Councils at the House of Delegates meeting in Denver.

Elected to the AVMA Council on Biological and Therapeutic Agents were Dr. N. H. Booth (MSU '47) of the Colorado State University College of Veterinary Medicine, Fort Collins; J. R. Harris (API '43), Bristol, Tenn; and Roger P. Link (ISU

'34) of the University of Illinois School of Veterinary Medicine, Urbana.

The new members of the AVMA Council on Education are: Drs. T. Lloyd Jones (ONT '34) dean of the Ontario Veterinary College at Guelph, who will represent the basic sciences; and R. E. Rebrassier (OSU '14), Columbus, Ohio, who will represent postgraduate education.



Dr. J. R. Harris



Dr. T. Lloyd Jones



Dr. R. E. Rebrassier



Dr. G. H. Gilbert



Dr. George T. Edds



Dr. G. C. Poppensiek



Dr. C. J. Parshall



Dr. E. W. Peck

Dr. G. H. Gilbert (COL '41), Arvada, Colo., was elected to the AVMA Judicial Council.

The AVMA Council on Public Health and Regulatory Veterinary Medicine's new members are Drs. R. K. Anderson (COL '44) of the University of Minnesota's College of Veterinary Medicine, St. Paul; and R. L. Knudson (OSU '34), Fairfax, Va.

Drs. George T. Edds (TEX '36), Fort Dodge, Iowa, and G. C. Poppensiek (UP

'42), dean of the New York State Veterinary College, Cornell University, Ithaca, were elected to the AVMA Council on Research.

The House of Delegates elected Drs. R. F. Jackson (MSU '40), St. Augustine, Fla., a general practitioner; C. J. Parshall (COR '28), Hayward, Calif., a small animal practitioner; and Eugene W. Peck (KSU '33), Auburn, Neb., a general practitioner, to the AVMA Council on Veterinary Service.

Dr. Choquette Elected President of Canadian Association

Dr. L. P. E. Choquette (MON '39) was elected president of the Canadian Veterinary Medical Association at its annual convention in Halifax, Nova Scotia, July 25-27.

Dr. Choquette, of St. Hyacinthe, Que., obtained his Master's and Ph.D. degrees in science from McGill University. While studying at the Institute of Parasitology, he was affiliated with the School of Veterinary Medicine and the School of Hygiene of the University of Montreal as a part-time professor. In 1951, he studied at the Algier's Pasteur Institute. In 1954, Dr. Choquette became a professor at the Institute's School of Veterinary Medicine. He left the Institute in 1956 to become head of the provincial health department laboratory.

Since 1959, Dr. Choquette has worked with the Service of Faune Conservation of the federal government. His offices and laboratories are at the University of Ottawa where he is also a professor in the science department.



Dr. L. P. E. Choquette

Dr. Choquette has written several veterinary medical publications especially related to parasitology. He is an active member of the College of Veterinarians of the Province of Quebec. He has served as secretary-treasurer since 1956. He has also been a member of the editorial board of the *Canadian Journal of Comparative Medicine*, and in January, 1960, was nominated to serve on the editorial board of *Revue Veterinaire Canadienne*.



Dr. Clarence H. Pals

Dr. C. H. Pals to Head Federal Meat Inspection for USDA

Dr. Clarence H. Pals (ISU '32) has been appointed director of the Meat Inspection Division in the Agricultural Research Service of the USDA. His appointment was effective Sept. 1, 1960.

Dr. Pals joined the USDA in November, 1932, as a veterinary meat inspector in Chicago. Other field assignments took him to Fort Dodge (1934-39), Esterville (1939-40), and Sioux City, Iowa (1940), as assistant inspector in charge. In 1941 he went to New York as assistant inspector in charge. Dr. Pals became assistant to the chief of the Meat Inspection Service in Washington, D.C. in June, 1944, and in November he was named chief of the trade label and standardization section.

A 1955 recipient of the USDA Superior Service Award, Dr. Pals is vice-president of the International Association of Veterinary Food Hygienists, past chairman of the food hygiene committee of the American Veterinary Medical Association, and a member of the Commission for Foreign Veterinary Graduates.

Dr. Pals is replacing Dr. Albert R. Miller (ISU '24) who is retiring.

Dr. T. J. Matthews Promoted

Dr. Thomas J. Matthews (UP '50) has been promoted to a supervisory position at the Chicago, Ill., USDA meat inspection station.

Dr. Matthews has been inspector in charge



Dr. Thomas J. Matthews

of the Buffalo, N.Y., station for the past year. He entered the meat inspection service at Madison, Wis., in 1953, and in 1955 he was transferred to Newark, N.J., where he remained until he assumed his duties at Buffalo.

Dr. F. H. Shimp Transferred

Dr. Frank H. Shimp (MO '52) is the new inspector in charge at the Buffalo, N.Y., USDA meat inspection station.



Dr. Frank H. Shimp

Dr. Shimp joined the meat inspection division in 1953 in Kansas City, Kan. He was

transferred to Smithfield, Va., in 1956, where he has worked until his recent transfer.

Dr. Shimp replaces Dr. Thomas J. Matthews (UP '50).

Dr. E. M. Jones Promoted

Dr. Earl M. Jones (AUB '51) was appointed assistant chief staff officer, screwworm eradication, Animal Disease Eradication Division of the Agricultural Research Service, USDA, in June, 1960. Since 1959 he has been a staff veterinarian, screwworm eradication program.



Dr. Earl M. Jones

Dr. Jones joined the USDA in 1952 as a meat inspector in Moultrie, Ga. He also worked as a meat inspector in Alabama and Florida. He was transferred to Mexico where he worked as a field veterinarian and as an area supervisor during the last months of the Mexico-United States foot-and-mouth disease eradication program.

When he returned from Mexico, Dr. Jones worked as a field veterinarian in Texas and then as a laboratory veterinarian in New Mexico in the Animal Disease and Parasite Research Division of ARS. While in this position, he performed research on external parasites affecting livestock and poultry.

In April, 1958, Dr. Jones was reassigned to the Animal Disease Eradication Division, Baton Rouge, La., as supervisor of the screwworm inspection line. Under the supervision of veterinarians in charge in Louisiana, Arkansas, Mississippi, and Ten-

nessee, he assisted in establishing 13 screw-worm inspection stations along the eastern borders of Arkansas and Louisiana.

State Board Examinations

ARIZONA—Jan. 18-19, 1961, University of Arizona, Tucson, Ariz. Dr. William E. Snodgrass, Secretary, Route 2, Box 373, Glendale, Ariz.

Among the States and Provinces

California

MASTITIS CONTROL DISCUSSED AT JESSUP FARMS.—The use of vaccination as an effective mastitis control measure is most promising, said Dr. R. C. Hubbard (MSU '46), Artesia, in his luncheon speech at the Jessup Breeders field day, June 14.

Dr. Hubbard pointed out that the vaccine is relatively inexpensive and lasts 3 to 6 months. However, he warned dairymen they shouldn't expect too much from it.

Dr. Hubbard spoke to a group of dairymen from several western states who inspected the Roger Jessup Farms, Glendale, during its annual field day.—*Western Dai. J. July, 1960.*

DR. ROBERTS GOES TO VIENNA ON NIH RESEARCH GRANT.—Dr. Seymour R. Roberts (MSU '40), Richmond, Calif., has been awarded a special traineeship grant by the National Institutes of Health for study in Vienna, Austria.

Dr. Roberts, a small animal practitioner, will study comparative ophthalmology at the Eye Clinic for Animals, a department of Vienna's veterinary school.

Having maintained a practice in Richmond since 1944, Dr. Roberts is also a clinical associate of the Department of Ophthalmology, Stanford Medical Center. He is past-president of the Alameda-Contra Costa Veterinary Medical Association and is now serving as vice-president of the Bay Counties Veterinary Medical Association.

Dr. Roberts was appointed to the California State Board of Examiners in Vet-

erinary Medicine in February, 1959, and was elected president of the American Society of Veterinary Ophthalmology last year.

S/KEN HUMPHREYS, *executive secretary*

NEW BEEF CATTLE FEEDING YARD AT UNIVERSITY OF CALIFORNIA.—Construction of a \$100,000 feed mill as part of a new experimental beef cattle feeding yard began August 15 on the Davis campus of the University of California.

The mill should be completed sometime this winter and will have a capacity of 5 tons of prepared feed an hour. It will include machinery for rolling or grinding grain and pelleting rations. Accurate control and precision mixing will be emphasized. Also to be constructed are storage facilities for about 350 tons of hay and 180 tons of grain and a feedlot to accommodate up to 400 cattle at a time.

The entire project is being financed by private donations from cattle feeders and allied industries. More than \$100,000 has been collected to date, enough to build the mill, but only about half the amount needed for the entire facility. A special committee of the California Cattle Feeders Association headed by D. E. Alexander, Napa, is continuing the drive for the remainder.

Alexander and Harold H. Cole, former head of the animal husbandry department, began planning to build this facility several years ago to fill the need for more research in California's multimillion dollar cattle-feeding industry.

Illinois

DR. PAUL D. BEAMER TO ASSIST AT INDIA VETERINARY COLLEGE.—Dr. Paul D. Beamer (OSU '41), of the University of Illinois veterinary school faculty, will serve two years as advisor to the dean of the College of Veterinary Medicine, Uttar Pradesh Agriculture University, Phoolbagh, India.

The Indian university is the first to be patterned after the land-grant universities in the United States. The University of Illinois is sending advisors to the colleges and departments of the new school which opened July 1. Dr. Beamer is the first College of Veterinary Medicine faculty member appointed to such a post. He will assist in the over-all development of the new college and in building and guiding a program in pathology and microbiology.

After serving as emergency district war food assistant for northern Illinois during World War II, Dr. Beamer went to the University of Illinois where he received his M.S. and Ph.D. degrees in veterinary pathology and hygiene. While at the University, Dr. Beamer served as chairman of the North Central States Research Committees investigating Newcastle disease and diseases of young swine, and on the committee investigating mucosal disease of cattle. He has published 40 papers dealing with animal diseases and their control.

Dr. and Mrs. Beamer have been active members of the Champaign County Chapter of the American Cancer Society, of which he has been chairman for the past two years. He is also a member of the Illinois State Veterinary Medical Association, serving on the Association's Hog Cholera Eradication Committee, and a member of the American College of Veterinary Pathologists.

Dr. and Mrs. Beamer traveled to his post in India via San Francisco, Honolulu, Tokyo, Hong Kong, Bangkok, and New Delhi.

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DR. S. K. SINHA APPOINTED TO UNIVERSITY OF ILLINOIS STAFF.—Dr. S. K. Sinha, has been appointed to the staff of the University of Illinois College of Veterinary Medicine. He will fill the post of adviser in pharmacology, College of Veterinary Science, Mhow, Madhya Pradesh, India.

Dr. Sinha, a native of Khulna, Bengal, India, is an American citizen. He received his M.S. and Ph.D. degrees from the University of Wisconsin.

Before joining the Illinois faculty, he was Director of Biological Research for Jensen-Salsbery Laboratories, Kansas City, Mo., director of a Pennsylvania state veterinary diagnostic laboratory, and an instructor at the University of Pennsylvania.

Kansas

KANSAS STATE UNIVERSITY'S SCHOOL OF VETERINARY MEDICINE COMPLETES \$100,000-REMODELING PROJECT.—A \$100,000 remodeling project to improve the animal disease research and teaching facilities of Kansas State University's old veterinary hospital, now Burt Hall, was recently completed.

A legislative appropriation of \$53,000 and a grant of \$47,000 from the National Institutes of Health made it possible for the

school to install modern facilities especially for work in animal and poultry viruses.

Nine isolation units have been constructed with airtight doors, individual air flow filters, temperature and humidity controls, and sterile compartments to enable research workers to perform more accurate work. Only the research worker in charge and an attendant will be allowed to enter these rooms for the duration of a project.

The first floor of the building will house the department of physiology and pharmacology and include facilities for classroom and laboratory instruction and research in animal physiology and pharmacology. Facilities for housing poultry, guinea pigs, rabbits, dogs, and a few sheep and swine will be provided for research instruction.

Equipment will include an x-ray therapy unit donated to the School of Veterinary Medicine by the Atomic Energy Commission. The unit will be used by any department on campus doing radioisotope research work.

Kentucky

NEW OFFICERS FOR KENTUCKY V.M.A.—Dr. Sherman A. Glass (OSU '39) became president of the Kentucky V.M.A. at its 49th annual meeting in July.

Other new officers are: Drs. J. C. Luckett (OSU '50), Russellville, first vice-president; R. L. Hectorne (OSU '28), Louisville, second vice-president; and T. N. Snider (AUB '55), Louisville, third vice-president. Dr. L. S. Shirrell (ISU '52) was re-elected secretary-treasurer.



New officers of the Kentucky V.M.A. are (left to right) Drs. S. A. Glass, president; J. C. Luckett, first vice-president; R. L. Hectorne, second vice-president; and L. S. Shirrell, secretary-treasurer.

The program of the meeting included talks on the diagnosis and treatment of internal and external parasites, equine practice, distemper and infectious hepatitis in dogs, and vertical integration in the swine industry.

Massachusetts



Dr. Morton Wolf (MSU '44), secretary-treasurer of the Massachusetts V.M.A. discussed Massachusetts' Operation Dogbite and Rabies Control on the Louise Morgan program, WNAC-TV, Boston. Other discussion participants were Miss Morgan and Dr. Frank R. Philbrook, assistant director, Division of Communicable Diseases, Massachusetts Department of Public Health.

Michigan

DR. JOHNSTON GOES TO INDONESIA.—Dr. Raymond F. Johnston (MSU '49) will advise the Indonesia Faculty of Veterinary Medicine, Bogor, Java, as part of a University of Kentucky international project sponsored by the International Cooperation Administration.

Dr. Johnston began a two-year leave on Sept. 1, 1960, from Michigan State University where he is an associate professor of physiology and pharmacology.

He received his Ph.D. degree from the University of Minnesota in 1959, and has been a member of the Michigan State University staff since 1949. Dr. Johnston has been an active research worker, particularly interested in tranquilizers and the effects of removal of the pituitary gland on cancer in dogs. He plans to continue his tranquilizer studies in Indonesia.

North Carolina

WESTERN CAROLINA V.M.A. ELECTS NEW OFFICERS.—Dr. Robert W. LaDu (MSU '49), West Asheville, has been elected president of the Western Carolina V.M.A. Dr. John I. Innes (ISU '45), West Asheville, has been elected vice-president and Dr. Jerry A. Humphrey (OKL '57), West Asheville, secretary-treasurer.

North Dakota

DR. T. O. BRANDENBURG RETIRES.—After 30 years of service to North Dakota as execu-

tive officer and state veterinarian, Dr. T. O. Brandenburg (COR '13) retired in July.

For 20 years after his graduation from veterinary college, Dr. Brandenburg practiced in Lakota, N. D. He recalls this period as a time of transition in veterinary medicine.

Veterinary medicine in 1913 was all "horse practice" with only a few calls to attend cattle. But in less than ten years the tractor replaced the draft horse, and practice changed to cattle, sheep, swine and poultry. Dr. Brandenburg commented: "Anyone too old to adjust or without the fundamental training was through. A lot of the old boys were sunk. Their horse was gone."



Dr. T. O. Brandenburg

In 1930 Dr. Brandenburg moved to Bismarck to become executive officer and state veterinarian for North Dakota. During his 30 years of service he has given great emphasis to disease control in the state.

Dr. Brandenburg has been a member of the state veterinary examining board as well as of the North Dakota V.M.A. and the AVMA. At one time he was chairman of the U.S. Livestock Sanitary Association.

On two occasions the state sent Dr. Brandenburg to foreign lands—once to London to attend an International Veterinary Congress and once to Mexico to study foot-and-mouth disease.

DR. FLAGG NEW STATE VETERINARIAN.—Dr. Dean E. Flagg (OSU '45) is the new executive officer and state veterinarian for the North Dakota Livestock Sanitary Board. He has been North Dakota's assistant state veterinarian for nine years.



Dr. Dean E. Flagg

Dr. Flagg set up a general practice in Wyanet, Ill., after his graduation from veterinary college. Then he accepted an appointment as federal meat inspector at West Fargo, N. D. After five years, Dr. Flagg moved to Bismarck and became Dr. Brandenburg's assistant.

Ohio

ORTHOPEDIC WORKSHOP AND SEMINAR TO MEET.—An orthopedic workshop and seminar will be held at the Northern Hills Animal Clinic, Cincinnati, Nov. 4-6, 1960. Dr. Richard Rudy, chairman of Ohio State University's Department of Veterinary Surgery and Radiology, will conduct the sessions.

The first morning of the meeting, lectures and illustrations on fracture healing and repair procedures will be given. In the afternoon, there will be a workshop session for practice in the application of skeletal fixation for fractures of the head, thoracic limb, pelvis, and pelvic limb.

The second morning of the meeting will consist of lectures and illustrations of pathologic physiology of joints and procedures for treatment of functional joint disorders. A workshop session on the application of surgical procedures for treatment of joint disease will be held in the afternoon.

The third day there will be discussions and seminars.

The total cost of equipment to be used for illustrations and workshop sessions during the three-day meeting is estimated at \$74.50.

Attendance will be limited to 14 and a \$50 fee will be charged.

Pennsylvania

DEMONSTRATION CONFERENCE ON DISEASES OF FARM ANIMALS AT UNIVERSITY OF PENNSYLVANIA.—Progress in animal health findings and research were graphically illustrated at the First Demonstration Conference on "Diseases of Farm Animals in Pennsylvania," May 24, 1960, at the University of Pennsylvania's School of Veterinary Medicine.

Four diseases in farm animals were described and demonstrated by research investigators from the School of Veterinary Medicine. Subjects were: A New Approach to the solution of Mastitis; Cancer in Dairy and Beef Cattle; Poultry Cancer; and Heart Disease in Animals.

The advantages of making the veterinary school a part of the University medical center was discussed by the luncheon speakers: University President Gaylord P. Harnwell; Dr. I. S. Ravdin, vice-president for medical affairs; and Dr. Samuel F. Scheidy, president of the AVMA.

Nearly 200 guests, representing the general assembly, state administrative departments, Pennsylvania animal industry groups, and alumni of the school, attended the special half-day program.

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Miss Pennsylvania to Study Veterinary Medicine



Miss Pennsylvania, 1961, Priscilla Mae Hendricks, 18, Shillington, plans to study veterinary medicine at the University of Pennsylvania School of Veterinary Medicine this fall.

Miss Hendricks competed in the Miss America contest in Atlantic City, N. J.

Miss Pennsylvania, who will study veterinary medicine.

—World Wide Photo

Wisconsin

CORRECTION OF IDENTIFICATION.—In the July 1 issue of the JOURNAL, Among the States and Provinces section, an announce-

ment stated that "Dr. C. Rucera, Research Products Company, St. Joseph, Mo., explained some problems in drug manufacturing"—in a story about the Northeastern

Wisconsin V.M.A. meeting. The name should have been Dr. Carrell J. Kucera and he is employed by Research Laboratories, Inc., St. Joseph, Mo.

Veterinary Military News

Statistical Quality Control Class



The second Statistical Quality Control Class of the U.S. Army Medical Service Meat and Dairy Hygiene School completed its training recently. The men who took the training are (back row, left to right): Major Leon D. Johnson; Lt. Col. Howard C. Poulin; Lt. Col. Hugh B. Campbell; Major Thomas G. Murnane, Jr.; Capt. Millard L. Tierce; and Lt. Col. Walter W. Miller. Front row—Col. James P. Crawford; Col. Nels F. Christensen, director of training; Major Wm. A. Bridenstine, instructor; Lt. Col. Howard C. Maxey; Pvt. Larry H. Hundley.

Colonel Betzold Assigned to Brooke Army Medical Center

Colonel Curtis W. Betzold (COR '32), former chief veterinarian of the U.S. Army in Europe, has been assigned to Brooke Army Medical Center as director, Department of Veterinary Science, Army Medical Service School.



Colonel Curtis W. Betzold

Orientation at Brooke Army Medical Center



These 34 newly commissioned veterinary officers completed the Army Medical Service School's Military orientation course at Brooke Army Medical Center, August 19. The majority of the group will go to the Meat and Dairy Hygiene School in Chicago for a ten-week course in military food inspection specifications and procedures. Others will go directly to military research centers for duty.

Association of Military Surgeons to Meet in October

Over 2,000 American and foreign physicians, dentists, veterinarians, nurses, and medical specialist delegates are expected to attend the 67th annual convention of the Association of Military Surgeons, Oct. 31-Nov. 2, 1960, in Washington D.C.

The theme of the three-day convention is "The Military Role in Medical Progress." All three days there will be special section meetings for the professions represented, as well as medical, scientific, and technical films and exhibits. No registration fee will be charged and the Association is encouraging visitors to attend the meeting.

The veterinary section meeting will be on November 1 between 2:30 and 4:30 p.m. Dr. C. D. Van Houweling (ISU '42), chairman of the program committee, will preside.

Subjects to be discussed at the section meeting are: "The Safety of Our Foods," by M. R. Clarkson (WSU '30), associate administrator, Agricultural Research Service, USDA; "Foreign Animal Disease Threat," by Col. F. D. Maurer (WSU '37), chief, Veterinary Pathology Division, Armed Forces Institute of Pathology, Walter Reed Army Medical Center; "Respiratory Infections of Poultry Observed During Inspection," by Dr. G. S. McKee (OSU '33), head, Pathology Section, Inspection Branch, Poultry Division, Agricultural Marketing Service, USDA; "The Development and Production of Live Virus Vaccines," by Dr. Charles J. York (OSU '47), Pitman-Moore Company, Indianapolis, Ind.; and "Recognized Methods of Humane Slaughter," by K. F. Johnson (WSU '38), chief staff officer for humane slaughter, Meat Inspection Division, Agricultural Research Service, USDA.

Dr. DeTray, besides being a veterinarian, had been a farmer, farm implement dealer, livestock buyer and seller of stock feeds.

A. A. Eddingfield (KCV '09), 79, a retired veterinarian from Plainfield, Neb., died August 24, 1960, of cancer.

Dr. Eddingfield maintained a practice in Nebraska for many years and then entered federal service.

Allen E. Fogle (OSU '10), 71, Columbus, Ohio, died July 26, 1960, after a long illness.

Dr. Fogle had been veterinarian in charge of livestock markets of the Division of Animal Industry, Ohio Department of Agriculture, for 40 years before retiring.

W. W. Forsyth (OVC '13) of Toronto, Ont., died April 4, 1960.

***D. W. Gerber** (IND '09), 84, Clay City, Ind., died June 15, 1960.

Dr. Gerber was made a life member of the AVMA in 1958. He had practiced in Clay City since his graduation from veterinary school except for 15 years during which he in the stockyards at Oklahoma City.

Chester Hassel (USC '11), 80, Cincinnati, Ohio, died June 6, 1960.

Dr. Hassel, who was born in Cincinnati, retired 10 years ago after working for the federal government in New York and Chicago.

W. F. Heyde (ONT '94), 90, Tucson, Ariz., died June 29, 1960.

Dr. Heyde practiced in St. Louis, Mo., from 1948 until he retired. From 1918 to 1940, he was city veterinarian for St. Louis. He lived in Phoenix for four years before moving to Tucson.

W. T. Hufnall (IND '11), 71, Houston, Texas, died June 8, 1960.

Dr. Hufnall died of a heart attack 30 minutes after returning from a trip to Madison, Ind., to visit his parents' graves. After receiving his D.V.M. degree, he opened a practice in Paris, Texas. He wrote a weekly column entitled "Your Dog" for the Houston Chronicle at that time. Dr. Hufnall retired briefly in 1949 but returned to a limited practice shortly afterward.

Deaths

Star indicates member of AVMA

Ray Church (KCV '11), 79, died Feb. 17, 1960, from injuries incurred in a fall in December, 1956. Dr. Church had practiced in Clear Lake, Wis. .

Emory L. DeTray, 68, Defiance, Ohio, died July 11, 1960, of a heart ailment complicated by uremic poisoning.

F. T. Hull (MCK '09), Fresno, Calif., died June 6, 1960.

Dr. Hull was born in Boston and lived in Fresno since 1924. He was a retired state animal control disease officer.

Earl H. Humphrey (MCK '05), Santa Maria, Calif., died June 29, 1960.

Dr. Humphrey was Santa Maria's first veterinarian and he worked in the community for 53 years. He was a member of the city planning committee for 15 years.

***Charles Johnson** (CVC '20), 63, Cedar Rapids, Iowa, died June 23, 1960.

After receiving his D.V.M. degree, Dr. Johnson went to Frederick, S. Dak., as an employee of the South Dakota Livestock Sanitary Board. Later he worked for the U.S. Department of Agriculture doing field work and meat inspection. Dr. Johnson was also a member of the National Association of Federal Veterinarians and the Chicago Veterinary College Alumni Association.

Joseph E. Johnson (OVC '19), 68, of Kitchener, Ont., died March 26, 1960.

***P. E. Johnson** (CVC '14), 70, Modesto, Calif., died June 9, 1960.

Dr. Johnson, who was born in Iowa, was injured in an automobile accident Feb. 11, 1960. An autopsy was conducted to determine whether he died from an illness or injuries sustained from the accident. Dr. Johnson became a life member of the AV-MA in 1957.

James P. Jorgensen (ISU '06), 78, Elk Horn, Iowa, died July 4, 1960.

Dr. Jorgensen maintained a general practice in Elk Horn for 54 years.

Lieutenant Colonel Algernon H. Kerr (KCV '16), 74, Clinton, N.C., died Oct. 25, 1959, from Parkinson's disease.

After graduation from veterinary college, Colonel Kerr served the city of Norfolk, Va., as milk inspector until 1918 when he joined the U.S. Army as second lieutenant. Upon discharge in 1918, he practiced at Clinton, N.C., for two years. In 1922 he became milk and food inspector for the city

of Goldsboro, N.C. In 1930 he was made chief of the Dairy Division of the Department of Agriculture at North Carolina State College. In 1937 he became president of the R.E.A. Corporation at Bergan, N.C., but had to retire in 1946 because of ill health. When World War II began, he reentered the U.S. Army, serving from 1940 to 1944, and being discharged with the rank lieutenant colonel.

Romy R. Laughlin (ONT '13), 69, Mount Dora, Fla., died June 8, 1960.

For many years Dr. Laughlin owned and operated an animal hospital in Mayfield Heights, Ohio. Later, he opened a smaller veterinary hospital in Chagrin Falls, Ohio. His daughter, Dr. Roberta L. Fitts, also a veterinarian, now is its joint proprietor with her husband, Dr. Robert L. Fitts. Dr. Laughlin served for three terms in the 1930's as mayor of Mayfield Heights, Ohio.

D. E. Lawrence, 79, a retired veterinarian, died Aug. 5, 1960, in Chicago, Ill.

Dr. Lawrence had worked and lived in Lawrence County, Miss., until two years ago when he and his wife moved to Chicago.

William C. Logan (STJ '22), 68, Urbana, Ill., a tuberculosis specialist with the USDA Agricultural Research Service, Animal Disease Eradication Division, died June 22, 1960.

***Wood C. Markham** (GA '59), 32, Binghamton, N.Y., died Feb. 26, 1960, after a three-day illness.

Dr. Markham was conducting a mixed practice in Binghamton with his father, Dr. Miles Markham.

Daniel T. McMahon (ONT '88), 97, Chicago, Ill., died Aug. 13, 1960.

Dr. McMahon retired as a veterinary inspector from Union Stockyards in Chicago in 1945.

***Edward C. Phipps** (OSU '34), 50, died July 5, 1960, after a three-day illness following a heart attack.

Dr. Phipps had conducted a general practice at Fostoria, Ohio, since his return from military service in World War II.

Women's Auxiliary

Plans for the New Year

Plans for your New Auxiliary Year are most ambitious and challenging! With our steady increase in membership, that is as it should be. In our 43 years as the Women's Auxiliary to the American Veterinary Medical Association, our membership has grown as much as our program.

Our original project, the Student Loan Fund, was started 39 years ago, in Denver, Colo. Since then, the fund has grown through the generosity of our constituents, regional auxiliaries, and friends to a little over \$24,000. This is still one of our most important projects. At the present time, \$18,000 is on loan and \$7,000 will be available for loans in the coming year. Our loan fund is often hard-pressed to meet the increased demands placed upon it. We know you are proud, as is your National Auxiliary,

to have helped so many worthy students attain their degrees in veterinary medicine. We have faith that you will continue generously to support this most worthwhile project.

Our expanded Student Auxiliary and Awards programs will be continued. The annual reports of the student auxiliaries will be sent to each chapter in the spring so that they may be used in plans for the ensuing year. A \$50 check and a certificate will be awarded to the senior veterinary student in each veterinary school in the United States and Canada who has done the most to increase the prestige of the veterinary school on his campus.

During the short time that the Public Relations Program has been in existence, it has made remarkable strides. The Clipping

▶ The Women's Auxiliary Executive Board met to lay plans for meeting the challenges of the coming year.



◀ Dr. S. F. Scheidy, AVMA President, addressed the AVMA Women's Auxiliary House of Delegates and urged their support of AVMA activities.

District Directors of the AVMA Research Fund Campaign met to review plans for the campaign in Denver. Fund raising will begin early in 1961. Money will be solicited by Women's Auxiliary members from AVMA members. The goal of this year's campaign will be \$75,000.



Service has proved most beneficial. It is hoped we can expand this service to include more auxiliaries and that present participants will endeavor to cover ALL areas within their jurisdiction. One important goal, placing copies of "Veterinary Medicine as a Career" in all high schools of the United States and Canada, is being attained. An open meeting for all interested public relations workers will be held at the Detroit convention in 1961.

Our membership records are to be placed on IBM cards. The services of the clerk will be discontinued and the AVMA will be paid a uniform rate for services performed for the Auxiliary. Our office supervisor will continue in her present capacity.

Our historian has worked diligently to bring the Auxiliary History up to date. She will continue with this project, and we hope soon to have a brief resume for you.

The new look and increased content of Auxiliary articles in the Journal have received many favorable comments. Our editor has planned another outstanding series of articles for the coming year. She asks your cooperation. Please send her news and pictures of your auxiliary and its accomplishments.

Support of education in veterinary medicine was first sponsored by the Auxiliary in Denver 39 years ago. This year another important veterinary educational objective was adopted in Denver! At the request of the AVMA and on the recommendation of your Executive Board, our House of Delegates voted to accept the great challenge of raising \$75,000 for the AVMA Research Fund! (Details for this program are to be worked out by the AVMA staff and will be submitted to you soon.)

The AVMA Research Fund is the only program sponsored by the members of the Association to encourage research in all

phases of veterinary medicine so that the profession may better serve the public. Because the fund finances a professional activity it is believed that the members should supply those funds, and that the best way to obtain these donations is through personal solicitation, which the Auxiliary can supply. The average stipend for an AVMA Research Grant is around \$3,000 and the 1960 budget is \$35,800. This year only five of 23 qualified veterinarians could be selected to receive grants; six were renewed, giving a total of 11 grants. Compared with the demand, this is a sad state of affairs, but the most tragic thing is that present financial resources can support a comparable program for only one more year!

Members, a vitally important project of our husband's profession needs our support! His Association, the AVMA, has appealed to us, and believes that we can supply that support. We know that we can do it! We can do our share to support this nation-wide drive to solicit and to collect funds from each AVMA member. From past responses to our appeals, we know we can count on you. Through our Auxiliary, we have supplied funds for low-interest loans for many students. Through our donations to the AVMA Research Fund, we have also contributed toward the support of several veterinarians who have obtained M.S. and Ph.D. degrees. Members, we again appeal—let's contribute our time and energy to induce the AVMA membership to replenish the AVMA Research Fund during the next year by at least \$75,000, in order that the profession may help itself by enabling young veterinarians to obtain graduate training in research and teaching for the betterment of our profession which now serves mankind so well.

s/Mrs. E. E. Leasure, *president*
AVMA Women's Auxiliary

Potpourri of Convention Happenings

With a goal of \$75,000, the Women's Auxiliary to the American Veterinary Medical Association voted to spearhead the AVMA Research Fund campaign. President Mrs. E. E. Leasure has appointed 12 district directors who will oversee the solicitation of funds by Auxiliary members in their respective areas.

In pointing out the need for ever-expanding funds available for research grants, Dr. E. Neil Moore, 1956 Research Fellow from the State University of New York, and Dr. Erskine V. Morse, 1947 Fellow, now dean of the College of Veterinary Medicine at Purdue University, spoke at the Workers' Conference.

Dr. Moore said, "Veterinarians should be playing a more important role in preparative studies of medicine."

Dr. Morse commented that contributions to this fund will be an investment in the present for the future and that one of the dividends from this investment will be better-trained scientists.

New Auxiliary officers are: Mrs. E. E. Leasure, Manhattan, Kan., president; Mrs. C. M. Rodgers, Blandinsville, Ill., president-elect; Mrs. J. I. Cornwell, Asheville, N.C., vice-president, House of Delegates; Mrs. D. W. Clarke, Friday Harbor, Wash., vice-president for public relations media; Mrs. A. M. Simpson, Big Springs, Texas,

vice-president for publications; Mrs. A. W. Eivers, Salem, Ore., vice-president for student loans; Mrs. G. Dorney, Pleasant Valley, N.Y., vice-president for student auxiliaries; Mrs. D. A. Osguthorpe, Salt Lake City, Utah, secretary; Mrs. S. L. Hendricks, Des Moines, Iowa, membership secretary; Mrs. P. S. Roy, Jacksonville, Fla., treasurer; Mrs. F. R. Booth, Elkhart, Ind., retiring president.

Auxiliary members could well take lessons from the student auxiliary members in enthusiasm and efficiency as was evidenced at their Sunday night meeting at the Denver Hilton. Delegates from 16 schools were on hand to explain their triumphs and problems.

Among the topics discussed was the continuation of scientific exhibits by the girls for the national conventions. They voted to continue them. The Oklahoma and Kansas exhibits were among the most outstanding prepared by the student auxiliaries. All of the displays were arranged on the mezzanine floor of the convention hall.

Three student groups made 100 per cent on their honor roll displayed at the Auxiliary House of Delegates meeting. They were Oklahoma State, Colorado State, and Tuskegee. The student honor roll was new this year.

s/NANNETTE SIMPSON, vice-president for publications



Newly installed Women's Auxiliary officers are (seated left to right)—Mrs. P. S. Roy, Mrs. F. R. Booth, Mrs. E. E. Leasure, Mrs. C. M. Rodgers, and Mrs. D. A. Osguthorpe. Standing—Mrs. A. M. Simpson, Mrs. D. W. Clarke, Mrs. G. T. Dorney, Mrs. A. W. Eivers, and Mrs. S. L. Hendricks.



PREDOMINANT AMONG ANTIBIOTICS

Chloromycetin® (chloramphenicol, Parke-Davis)

has a wide range of usefulness and has assumed a position of unusual importance in veterinary therapy.

| LARGE ANIMALS | | |
|-----------------|---|--|
| Calves | Hemorrhagic septicemia (shipping fever) | 8 Kapsels® (250 mg. each) once daily |
| | Infectious diarrhea (white scours) | 2 Kapsels (250 mg. each) orally two or three times daily |
| Colts and Lambs | Infectious diarrhea | 4 Kapsels (250 mg. each) once daily |
| | Lambs | 1 Kapsel (250 mg.) twice daily |

| SMALL ANIMALS | | Chloromycetin dosage per lb. of body weight |
|---------------|---|--|
| Dogs | Gastroenteritis with accompanying diarrhea | 25 mg. per lb. once daily |
| | Urinary tract infections | 25 to 75 mg. per lb. daily, in divided doses, at 8-hr. intervals |
| | Secondary bacterial invaders of canine distemper | 75 mg. per lb. daily, in divided doses, at 8-hr. intervals |
| | Pulmonary infections and other infections due to Chloromycetin-susceptible organisms. | 75 mg. to 150 mg. per lb. daily, in divided doses, at 6 to 8-hr. intervals |
| Cats | Infectious feline panleukopenia | 50 mg. twice daily regardless of the size of the cat. |
| | Pulmonary infections and other infections due to Chloromycetin-susceptible organisms. | 75 mg. to 150 mg. per lb. daily, in divided doses, at 6 to 8-hour intervals. |

EYE INFECTIONS

When used locally, either as an aqueous solution or in ointment form, Chloromycetin will penetrate an intact corneal epithelium and will not delay its regeneration.

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for calf scours (enteritis)

ENTEUFUR[®] *bolus veterinary, small*



*bactericidal action
promptly controls
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93-95%^{1,2} of calves*

*no development of
resistant bacterial
strains or of
cross-resistance*

Remissions of calf scours following treatment with ENTEUFUR have been of a dramatic nature and uniformly high. In widespread field tests, cure rates of 93% and 95% have been obtained.^{1,2}

ENTEUFUR is a bolus containing the new antibacterial nitrofur, FURAMAZONE[®] (brand of nifuraldezone) 1 Gm., and bismuth subsalicylate 0.26 Gm. for its mildly astringent, anti-diarrheal action. FURAMAZONE is a *new* nitrofur selected for its specific bactericidal activity against gram-negative and gram-positive enteric bacteria, including the virulent strains of *E. coli* found in calf enteritis.

ENTEUFUR is nontoxic even when administered in doses well above therapeutic levels.

Dosage: 1 bolus perorally, twice daily, for 2 or 3 days.

Supplied: Boluses of 3.3 Gm. each, in box of 24.

1. Osborne, J. C. in *New Horizons in Chemotherapy*. Proceedings of First Regional Conference on the Nitrofurans in Veterinary Medicine. In press.

2. Bull, W. S.: *N. Amer. Vet.* 38: 3 (Jan.) 1957.

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WHAT IS YOUR *Diagnosis?*

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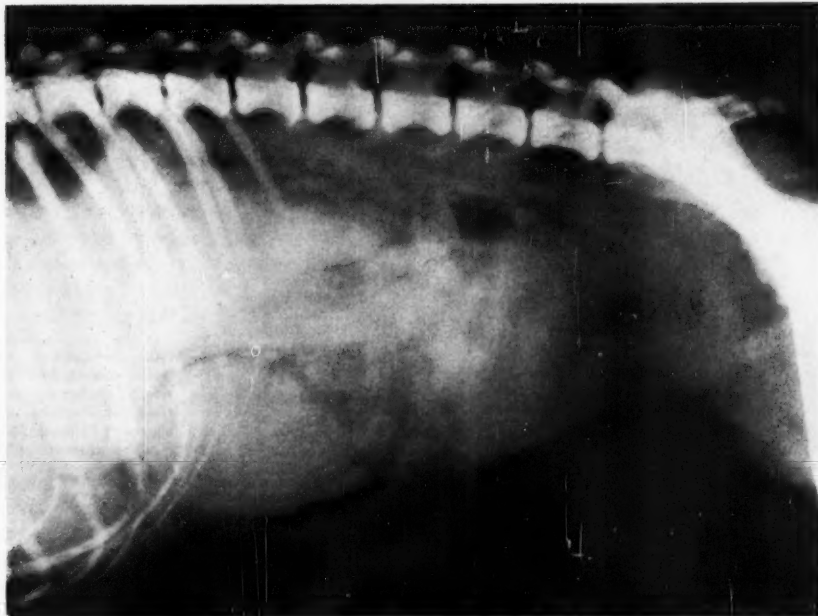


Fig. 1—Lateral recumbent radiograph of the dog's abdomen.

History.—A nonspayed, female Wire-Haired Fox Terrier, 11 years old, had lived a normal, healthy life except for an occasional epileptic seizure. During the past several days, she had been listless, inappetent, and had vomited occasionally. The vomiting was not considered unusual for this dog. Three weeks previously, the dog had a hemorrhagic exudate from the vulva and was thought to be in heat. An enlargement with distinct nodules measuring up to 4 cm. in diameter was palpated in the abdominal cavity. Lateral recumbent radiographs were taken (fig. 1).

Here Is the Diagnosis

(Continued from preceding page)

Diagnosis.—Two circumscribed nodules, identified by palpation of the abdomen, were visible as soft tissue masses in the lower abdominal area (fig. 2 (1) and (3)).

The stomach (2) could also be identified. From the history, physical examination, and radiographs, a diagnosis of pyometra was made.

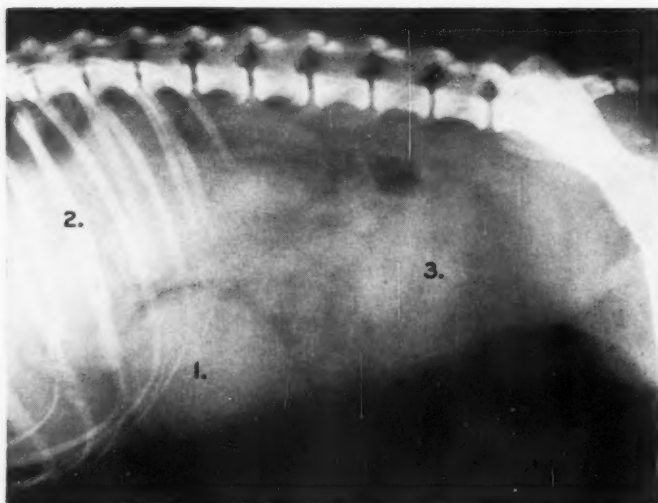


Fig. 2—Lateral recumbent radiograph of the dog's abdomen showing the sacculations in the uterus (1) and (3) and the stomach (2).



Fig. 3—Photograph of the uterus shows the left horn to be enlarged and sacculated (1) and (3) and the lumen filled with milky fluid. The walls of the right horn are thickened but the lumen contains no fluid.

Comment.—An ovariohysterectomy was performed. The changes in the uterus were primarily confined to the left horn (fig. 3) and the sacculations (1) and (3) corresponded to the shadows seen on the radiograph. The walls of the left horn were thin and the lumen contained milky fluid. The right horn was slightly enlarged and the walls were somewhat thickened, but the lumen contained no fluid. The dog recovered satisfactorily following surgery.

This report was submitted by Griselda F. Wolf, D.V.M., M.S., Department of Radiology, College of Veterinary Medicine, University of Minnesota, St. Paul, and was prepared with the assistance of Wayne Riser, D.V.M., M.S., Kensington, Md.

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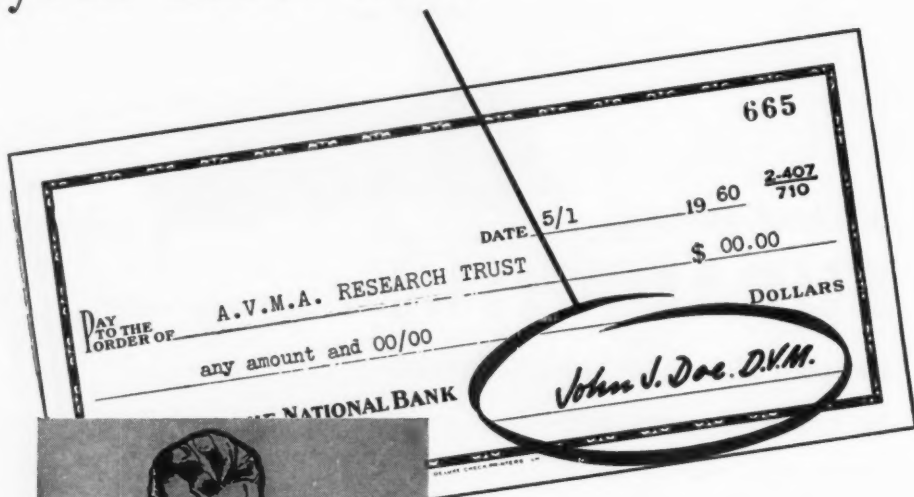


EATON LABORATORIES, NORWICH, NEW YORK



REFERENCES: 1. Michaelson, S. M., and Covert, M.: J. Am. Vet. M. Ass. 134:334 (Apr.) 1959. 2. Mosier, J. E., and Coles, E. H.: Vet. Med. 53:619 (Dec.) 1958. 3. Bell-off, G. B.: Calif. Vet. 9:27 (Sept.-Oct.) 1956. 4. Coles, E. H., and Mosier, J. E.: Am. J. Vet. Res. 20:1020 (Nov.) 1959. 5. Mosier, J. E.: Vet. Med. 52:445 (Sept.) 1957.

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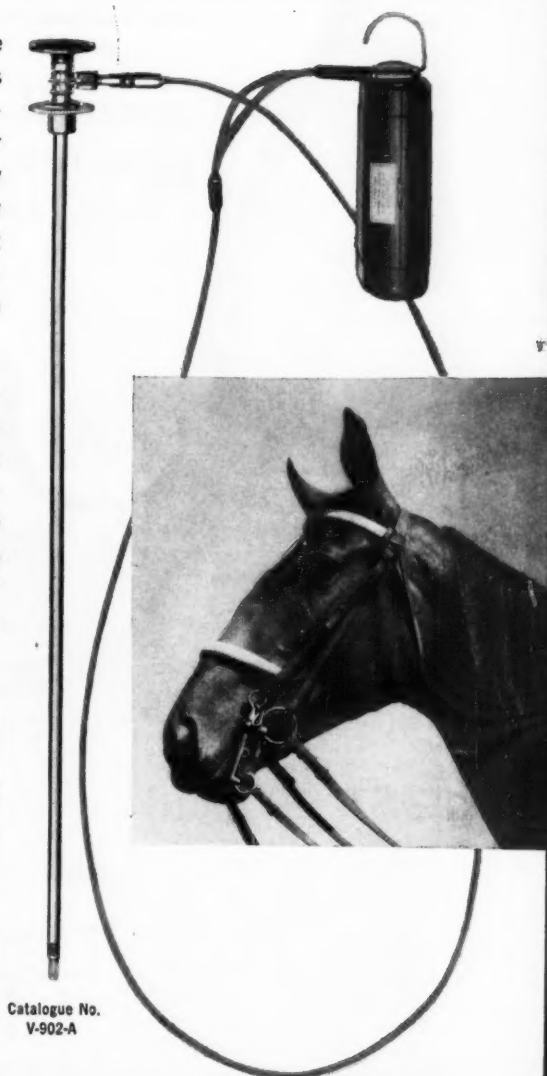
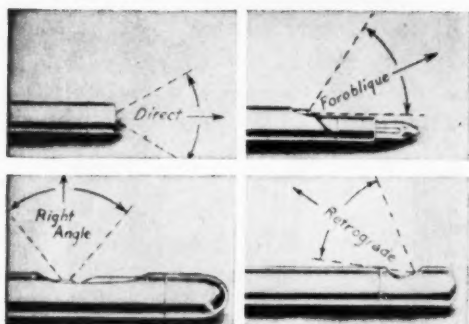
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History of the AVMA

There was meager attendance at the 1895 meeting in Des Moines; only 25 members answered roll call the first day. The Association, moreover, was without funds, primarily because the printing of the proceedings of the meetings in 1892 and 1893 had cost more than was taken in from dues. Accordingly, the dues had been raised from three to five dollars, thus creating another problem: despite increased membership, the actual income from dues was decreased by delinquencies.

In his report as chairman of the Committee on Education, C. A. Cary observed, "The United States is still blessed with a superabundance of veterinary colleges. One in Iowa, one in Illinois, one in Ohio, one in Pennsylvania, one in Massachusetts, two in New York State, and one for the entire South would more than supply the demand." He suggested that graduates of agricultural colleges with veterinary instruction should receive a year's credit in the recognized three-year veterinary colleges.

In response to objections to the teaching of veterinary science to agricultural students, W. B. Niles countered: "... the instruction received does not tend to produce empirics, but ... always tends to a higher appreciation of the science, and impresses the student with his incompetency to deal with all classes of cases."

Most of one day was spent in a discussion of the tuberculosis problem and resulted in a resolution "indorsing the tuberculin test and condemning physical examination only as unreliable, and microscopical examination of dairy milk as deceitful and unwise in the present day."

W. H. Hoskins was re-elected for an unprecedented third consecutive term as president; F. H. Osgood, C. C. Lyford and R. H. Harrison were elected eastern, central, and western vice-presidents, respectively; Sescio Stewart was elected secretary, and J. L. Robertson, treasurer.

+ + +

WILLIAM HORACE HOSKINS, D.V.S., was born in Rockdale, Pa., on July 23, 1860. In 1881 he was graduated from the American Veterinary College, and went to Philadelphia where he engaged in practice, business, politics, and teaching veterinary jurisprudence, ethics, and business methods at the University of Pennsylvania. During much of this time he

also edited the *Journal of Comparative Medicine and Veterinary Archives*. In 1917 he became Dean of the merged New York—American Veterinary College where he also taught jurisprudence and clinical medicine.

Dr. Hoskins was closely identified with the AVMA, the Pennsylvania and Keystone Veter-



Dr. W. H. Hoskins, AVMA president from 1893-1896.

inary Associations, and was an honorary member of several other state and regional groups. His record of attendance at 39 consecutive AVMA meetings probably has never been equalled. In addition to serving on numerous influential committees, he was secretary of the USVMA from 1888 to 1893, and president from 1893 to 1896.

Upon his death on August 10, 1921, the JOURNAL said, "As a successful practitioner, Dr. Hoskins ranked among the foremost in the United States, but he was never too busy nor too fatigued to take an active interest in all movements intended to elevate and promote the profession. He was an ardent advocate of a high standard of veterinary education, and his articles in veterinary publications and addresses before public gatherings accomplished much in helping to raise our standard to where it is now. He devoted much energy and time for twenty-five years to secure legislation in the interest of the Army veterinary service, and what has been accomplished was largely through his persistent efforts." Time has demonstrated that one of his greatest legacies to the veterinary profession was his son, H. Preston Hoskins, long-time secretary and editor of the AVMA JOURNAL.

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References: 1. Pollock, S.: Vet. Med. 54:97 (Feb.) 1959. 2. Hoffer, S. H.: Clinical report to CIBA. 3. Weir, H. T., and Hazelrig, J. W.: Clinical report to CIBA.

ULTRACORTENOL is available at ethical veterinary distributors throughout the United States.

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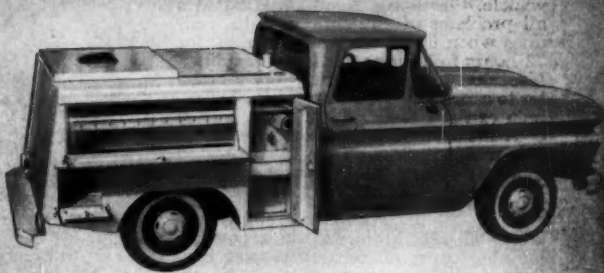
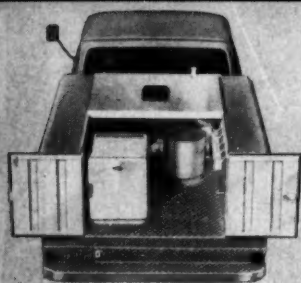
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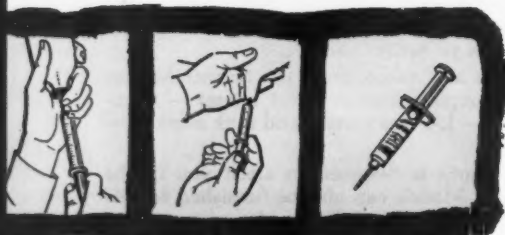
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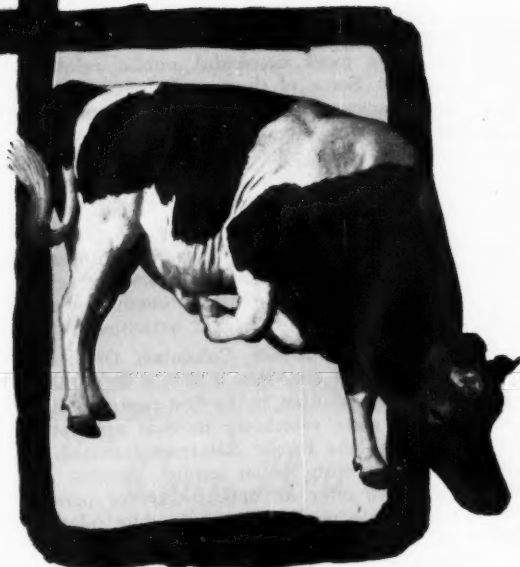


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Public Relations

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AMA PUBLIC RELATIONS INSTITUTE

On September 1 and 2, the American Medical Association held its 1960 Public Relations Institute at the Drake Hotel, Chicago, Ill. Over 400 persons attended, including public relations counsels to state medical societies, medical society executives, state and county medical society public relations chairmen, and guests from allied branches and fields of medicine.

Of the 39 speakers, 9 were not connected with medicine or medical societies. Mr. Pierre Martineau, Director of Research and Marketing, Chicago Tribune, gave the keynote address on *The Importance of the Public Image Versus Reality*. Public information alone, he said, is insufficient unless aimed at creating and implanting an image with public appeal.

Public Image

Mr. Gerald Skibbins, Opinion Research Corporation, Princeton, N. J., described some *Cracks in the Mirror* of the public's image of the doctor. He remarked on their general feeling that modern medicine is impersonal.

Two representatives of publicity media and a member of the AMA Council on Medical Services described their ideas on *How People See Doctors*. Participants included Mr. George Brandenburg, Midwest Editor, *Editor and Publisher*; Dr. Russell Roth of the AMA; and Mr. Herbert A. Carlberg, Director of Program Practices, CBS Television, New York City.

A second panel on *Why People See Them That Way* included Professor Raymond Mack, Department of Sociology, Northwest-

ern University; Dr. Nicholas Dallis, Scottsdale, Ariz., practitioner; and Mr. James E. Bryan, Consultant, Medical Administration and Medical Care Prepayment, Stamford, Conn.

A third panel was devoted to the *Need for Action on Aging*.

Schools on "Trial"

Mrs. Blanche B. Paulson, Director, Bureau of Public Personnel Services, Chicago Public Schools, participated in a mock court with the schools on trial for not interesting more children in medicine. Verdict? Both parties at fault and paroled each in the custody of the other to cooperate in career conferences for the schools.

Loren G. Schultz, City Editor, Springfield Daily News, Springfield, Ohio, and Charles Harrison, News Director, WEEK-TV, Peoria, Ill., were included in a panel on publicity titled *Don't Hide Your Light*. Both participants reported on their struggle to get physicians to talk, and the benefit to the public and the profession when good press relations were established with the local medical societies and the local newspapers, radio, and TV stations.

Local Projects

Additional panels were devoted to reports from state and local medical societies on their most successful public relations projects. Some of these included an emergency answering service, career orientation, and future doctor clubs. One local group, in order to personalize the physician, held a hobby show in their medical society and invited the press to attend.

The concluding sessions of the program included roundtables where interested parties could discuss field service, aging, the use of films, exhibits, county society bulletins, and medicolegal activities.

Dr. George Kukor, Columbus, Ohio, and Chairman of the Ohio V.M.A.'s Public Relations Committee, is the first representative from a state veterinary medical association to attend the Public Relations Institute.

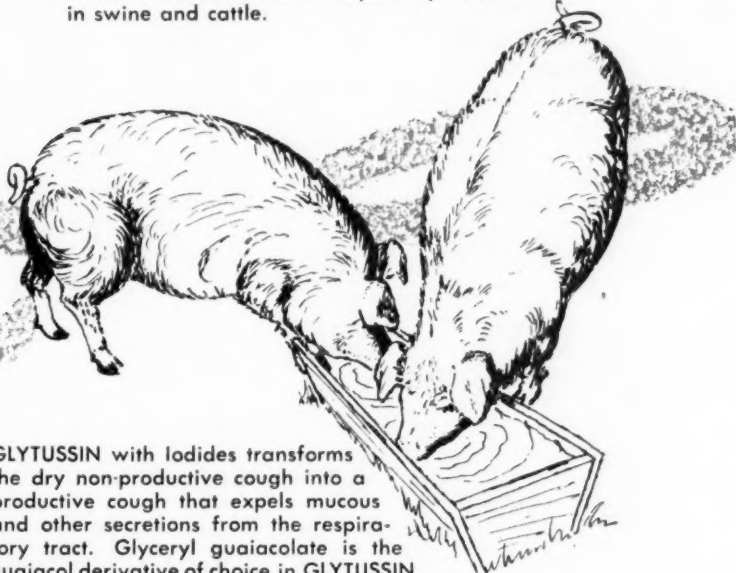
The Institute is an annual meeting designed to offer an opportunity for persons working in medical society public relations to exchange program ideas. Dr. Kukor learned of the meeting through his local medical society. The Ohio V.M.A. paid his travel and room costs and the AMA paid for his meals.

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The Council on Research of the AVMA announces the availability of a number of fellowships for postgraduate training for the academic year, 1961-1962.

The recipient of a fellowship must be a veterinarian and a citizen of the United States or Canada. Veterinary students who expect to graduate at the end of the current school year and who wish to follow a career in research may apply for a fellowship.

It is advisable that completed application forms be filed by Jan. 1, 1961, to allow time for correcting omissions and for some reasonable delay in arrival of letters of information from third parties. The latest date for filing the completed application is Feb. 1, 1961. Approximately one month is required for processing completed applications after receipt by the Council. Qualified persons should secure and submit applications as early as possible to insure their file being complete for presentation to the Committee on Fellowships.

The Committee on Fellowships of the Council on Research will meet early in March to consider applications and the awards will be announced soon afterward. The stipend will be determined in each case by the needs of the individual, the location of the school in which he proposes to work, and other factors. In general, the stipends range from 100 per month upward. Any qualified person interested in graduate training may obtain application blanks and other information from the deans of the various colleges of veterinary medicine or by writing to the Council on Research, American Veterinary Medical Association, 600 S. Michigan Ave., Chicago 5, Ill.

APPLICATIONS

Applicants Not Members of Constituent Associations

In accordance with paragraph (c) of Section 1, Article I, of the Bylaws, the names of applicants who are not members of constituent associations shall be published in the JOURNAL. Written comments received by the Executive Secretary from any active member regarding the application as published, will be furnished to the Judicial Council for its consideration prior to acceptance of the application.

YANG, TSU JU

376 Chung-Cheng Road
Tamsui, Taipei, Taiwan, China
D.V.M., Iowa State University, 1960.
Vouchers: I. A. Merchant and R. Allen Packer.

ROYCHOUDHURY, GUNINDRA KUMAR

Assam Veterinary College,
Gauhati, Assam, India
B.V.Sc., M.S., University of Missouri, 1960.
Vouchers: A. H. Groth and C. J. Bierschwal.

MOHANTY, JIBANANANDA

Orissa Veterinary College
Bhubaneswar, Orissa, India
B.V.Sc., M.S., University of Missouri, 1960.
Vouchers: A. H. Groth and H. H. Berrier.

MISHRA, ANANTA

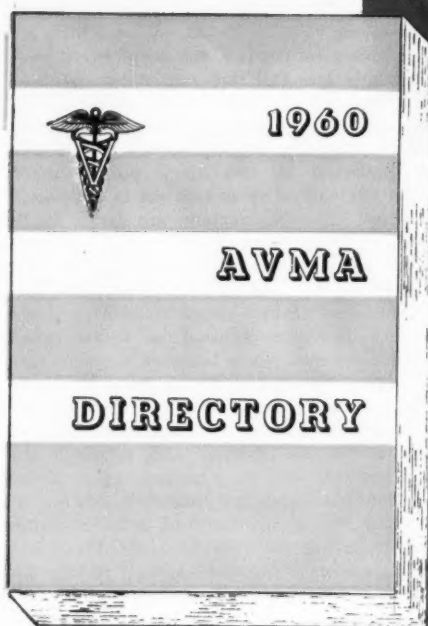
Orissa Veterinary College
Bhubaneswar, Orissa, India
B.V.Sc., M.S., University of Missouri, 1960.
Vouchers: A. H. Groth and H. H. Berrier.

Budgerigars and Poliomyelitis

Statements in British newspapers incriminating budgerigars as vectors in the dissemination of poliomyelitis virus have caused concern among bird lovers in that country.

A virus laboratory in Glasgow, Scotland, reported isolation of type 1 poliomyelitis virus from a budgerigar. This was associated with a case of fatal bulbar poliomyelitis in a 10-year-old boy who had been in close contact with the budgerigar.

A questionnaire sent to parents of children who had been affected with paralytic or nonparalytic poliomyelitis during the previous 2 years showed that 56 out of 124 families had kept a pet budgerigar. In 17 of these 56 households, the bird died about the same time the child contracted poliomyelitis. Research workers concluded that budgerigars are not commonly infected with poliomyelitis but conceded that these birds may occasionally acquire the infection from a human excretor and infect other human contacts.—*New Zealand Vet. J.*, 8, (1960): 15.



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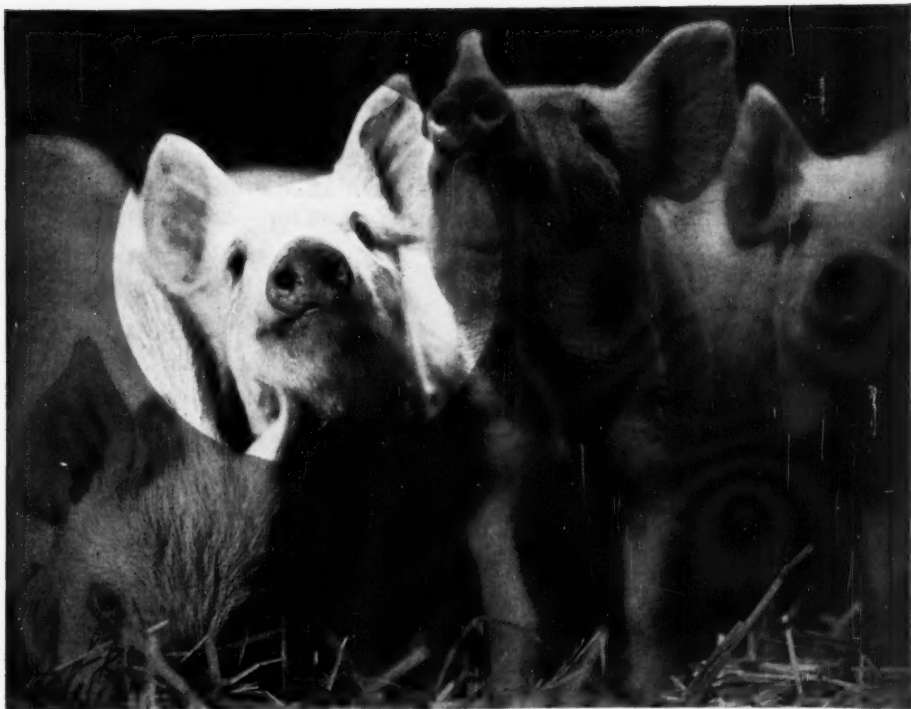
Texas Livestock Industry Utilizes More Veterinary Service

There are approximately 180 livestock auction markets in Texas, all of which are soon going to require the services of veterinarians one full day per week. At first, the veterinarian's only duty will be execution of the regulations concerning brucellosis, but it can be readily visualized that the potential in veterinary public health under the authority of this act is enormous. At least 150 veterinarians are going to be spending 20 per cent of a normal work week in the performance of services to the livestock industry and Texas.

Livestock Market Inspection contracts are already being negotiated in some areas, being 3-way contracts between veterinarian, market operator, and Texas Animal Health Commission. Being discussed are an arrangement whereby the market operator collects for the testing and employs the veterinarian, and an arrangement in which the sales barn operator furnishes only facilities, the veterinarian setting a fee schedule and collecting his own accounts. The latter arrangement is functioning well in one locality, with fees of \$2.00 per head for brucellosis testing and \$1.50 per head for vaccination.—Texas V.M.A. News Bull., No. 3, April, 1960.

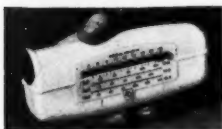


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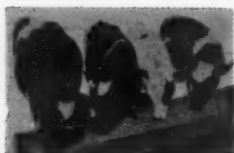
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Dr. R. A. Conant

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During the 1959-1960 school year, Dr. Conant was an instructor of veterinary surgery and medicine at Iowa State University.

The Value of Pets

The basic training of a veterinarian is such that he can render aid to any creature in need of help, and that aid should never be denied by one who has taken a professional oath in which he promises to dedicate his life to a cause or career. All animals are important and that importance is not measured by economic factors alone. The average dog or cat may not be worth much in terms of money; in most cases, their value can be assessed only by psychological standards.

Long years of intimate contact with man and of faithful service have advanced dogs and cats to the status of cherished members of the family. They share our joys, they bring comfort and sympathy to those that are ill in mind or body, they protect our property, and their loyalty reaches far beyond human standards. Whatever may be the case in other places, the household pets have become an essential part of British family life.

Veterinarians who devote their talents to small animal practice need not feel the qualms of lowered status. Pets have become a psychological necessity for the well-being of man. Veterinary surgeons who devote their time to the small animal branch of practice do as much good in the world as those who attend to the needs of the food-producing and working animals. — *British Vet. J.*, 116, (May, 1960): 159.

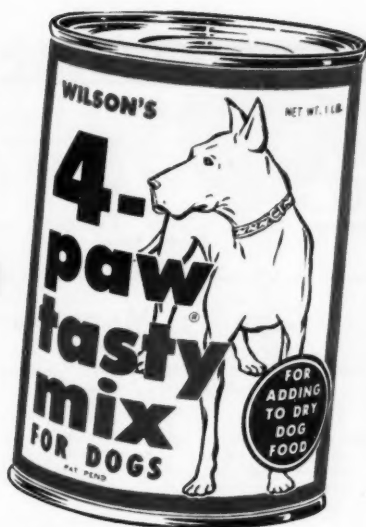
Quiz for Quidnuncs

1. How is bovine papular stomatitis diagnosed? Page 407.
2. What is the principal significance of bovine papular stomatitis? Page 409.
3. What is paragonimiasis in the dog? Page 417.
4. Of what value is tylosin tartrate as a treatment for infectious sinusitis of turkeys? Page 423.
5. How accurately may success in veterinary school be predicted using preveterinary grade-point averages and results of the Veterinary Aptitude Test? Page 429.

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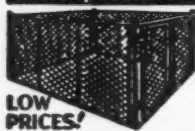
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Coming Meetings

Notices of coming meetings must be received 30 days before date of publication.

Instrument Symposium and Research Equipment Exhibit. 10th Annual Meeting. National Institutes of Health, Bethesda, Md., Oct. 3-7, 1960. James B. Davis, National Institutes of Health, Public Health Service, Bethesda 14, Md., executive secretary.

Illinois, University of. Forty-first annual conference and extension short course for veterinarians. University of Illinois, College of Veterinary Medicine, Urbana, Ill., Oct. 6-7, 1960. L. E. Boley, College of Veterinary Medicine, Veterinary Clinical Medicine, University of Illinois, chairman.

Illinois Conference and Extension Short Course for Veterinarians. College of Veterinary Medicine, University of Illinois, Urbana, Oct. 6-7, 1960. Dr. L. E. Boley, Chairman 1960 Veterinary Conference.

Helminthological Society of Washington. Fiftieth anniversary. Scientific program will be conducted at the University of Maryland, College Park, Md., Oct. 8, 1960. Helminthological Society of Washington, Animal Disease and Parasite Research Branch, ARS, USDA, Beltsville, Md., publicity committee.

Gaines Dog Research Center. Tenth annual symposium. Kankakee Civic Auditorium, Kankakee, Ill., Oct. 12, 1960. Dean C. A. Brandly, School of Veterinary Medicine, University of Illinois, Urbana, Ill., chairman.

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Purdue University. Forty-eighth annual conference for veterinarians. School of Veterinary Science and Medicine, Purdue University, Lafayette, Ind., Oct. 12-14, 1960. Erskine V. Morse, dean.

Eastern Iowa Veterinary Association, Inc. Forty-seventh annual meeting. Hotel Montrose, Cedar Rapids, Oct. 13-14, 1960. Charles B. Thayer, Medical Laboratory Center, S. U. I., Iowa City, Iowa, secretary.

Iowa State University. Twelfth Annual Veterinary Homecoming Luncheon. Veterinary Courtyard, Oct. 15, 1960. Daniel King, 419 Y.M.C.A., Moline, Ill., publicity chairman.

New England Veterinary Medical Association. Twenty-sixth annual meeting. Sheraton Biltmore Hotel, Providence, R.I., Oct. 16-19, 1960. L. T. Maloney, New England V.M.A. Consultant, 6 Beacon St., Boston, Mass.

United States Livestock Sanitary Association. Sixty-fourth annual meeting. Daniel Boone Hotel, Charleston, W. Va., Oct. 19-21, 1960. R. A. Hendershott, 33 Oak Lane, Trenton 8, N.J., secretary.

Southern Veterinary Medical Association, Inc. Annual meeting. Francis Marion Hotel, Charleston, S.C., Oct. 23-26, 1960. Otto M. Strock, 461 Maybank Highway, Charleston, S.C., general chairman.

Animal Care Panel. Annual convention. Sheraton-Jefferson Hotel, St. Louis, Mo., Oct. 26-28, 1960. Herbert Graff, 835 S. 8th St., St. Louis, Mo., convention secretary.

Conference of Public Health Veterinarians. Annual meeting. San Francisco, Calif., Oct. 30-Nov. 3, 1960. Dr. Joe W. Atkinson, National Institutes of Health, Laboratory Aids Branch, ARS, Bethesda, Md., secretary-treasurer.

Association of Military Surgeons. Sixty-seventh annual convention. Mayflower Hotel, Washington, D.C., Oct. 31-Nov. 2, 1960. Brig. Gen. J. A. McCallam, Veterinary Section, U.S. Army, ret., Washington, D.C., chairman.

Cornell University. Annual nutrition conference for feed manufacturers. Statler Hilton Hotel, Buffalo, N.Y., Nov. 2-4, 1960. For programs, preregistration and hotel reservation cards, contact: Prof. Harold H. Williams, Savage Hall, Cornell University, Ithaca, N.Y., chairman.

Ohio—Orthopedic Workshop and Seminar. Northern Hills Animal Clinic, 9211 Winston Rd., Cincinnati, Ohio. Nov. 4-6, 1960. Fee, \$50. Attendance limit, 14. Dr. Richard Rudy, Ohio State University, Veterinary Surgery and Radiology, Columbus, Ohio, chairman.

Missouri, University of. Thirty-sixth annual veterinary conference. University of Missouri, School of Veterinary Medicine, Columbia, Mo., Nov. 7-8, 1960. Cecil Elder, School of Veterinary Medicine, Veterinary Pathology, University of Missouri, chairman.

Arizona Veterinary Medical Association. Annual meeting. Safari Hotel, Scottsdale, Ariz., Nov. 13-15, 1960. Elmer B. Powell, 1102 S. Scottsdale Rd., Scottsdale, Ariz., local arrangement (phone—WH 5-6479).

Veterinary-Nutrition Conference. Sponsored by Midwest Feed Manufacturers Association and Iowa, Kansas, Missouri, Oklahoma, and Nebraska Veterinary Medical Associations. Continental Hotel, Kansas City, Mo., Dec. 12-13, 1960. Dr. James Bailey, Walnut Grove Products Co., Atlantic, Iowa, chairman.

Kansas Veterinary Medical Association. Fifty-seventh annual convention. Broadview Hotel, Wichita, Jan. 15-17, 1961. Dr. M. W. Osburn, Kansas State University, Division of Extension, Manhattan, Kan., secretary-treasurer.

Continued on adv. p. 52

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Dr. P. V. Christofferson New Squibb Assistant Medical Director

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Dr. Christofferson has maintained a private practice and was on the staff of Utah



Dr. P. V. Christofferson

State University as assistant professor in charge of the Utah Branch Veterinary Laboratory at Provo, Utah. He is known internationally for his research and reports on fluorosis in livestock. He has collaborated with the College of Dentistry at the University of Illinois in research on tooth development in cattle.

Dr. Christofferson is a member of the United States Livestock Sanitary Association, American College of Veterinary Toxicologists, American Association of Veterinary Nutritionists, and the AVMA.



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COMING MEETINGS—continued from adv. p. 50

Wisconsin Veterinary Medical Association. Forty-fifth annual meeting. Schroeder Hotel, Milwaukee, Wis., Jan. 15-17, 1961. W. J. O'Rourke, 540 W. Washington Ave., Madison 3, Wis., secretary.

Arkansas Veterinary Medical Association. Annual meeting. Hotel Marion, Little Rock, Jan. 22-24, 1961. Thayer D. Hendrickson, 7824 Cantrell Rd., Little Rock, Ark., secretary-treasurer.

Minnesota Veterinary Medical Association. Annual meeting. Leamington Hotel, Minneapolis, Minn., Jan. 23-25, 1961. B. S. Pomeroy, 1443 Raymond Ave., St. Paul 8, Minn., secretary.

Ohio State Veterinary Medical Association. Annual meeting. Commodore Perry Hotel, Toledo, Ohio, Feb. 5-8, 1961. Dr. R. E. Rebrassier, 1411 West Third Ave., Columbus 12, Ohio, executive secretary.

Missouri Veterinary Medical Association. Sixty-ninth annual meeting. Hotel Statler-Hilton, St. Louis, Feb. 19-21, 1961. Paul L. Spencer, D.V.M., P.O. Box 283, Jefferson City, Mo., secretary.

Foreign Meetings

Fourth International Congress on Animal Reproduction. The Hague, Netherlands, June 5-9, 1961. For additional information contact: the Secretariat of the Fourth International Congress on Animal Reproduction, 14, Burge-meester de Monchyplein, The Hague, Netherlands, Dr. L. Hoedemaker, secretary to the organizing committee.

Eighth International Congress of Animal Husbandry. Hamburg, Germany, June 13, 1961.

Twelfth World's Poultry Congress. Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia, Aug. 13-18, 1962. Dr. Cliff D. Carpenter, chairman, U. S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Calif.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Veterinarian, 92, Quits, Voids \$50,000 Debts

A retired veterinarian "kissed goodbye" to about \$50,000 in outstanding bills today in a classified advertisement in the *Elmira Star-Gazette* (New York).

Dr. John L. Johnson, 92 years old, of Horseheads made the announcement of the cancellation of bills and wished his former clients "all good and thanks." He had been practicing for 76 years before his retirement this week.

"As near as I can figure, people must owe me all of \$50,000," he said. "But I don't expect to see any of that money again. I might as well kiss it goodbye."

Dr. Johnson's state certification as a veterinarian states that he had been practicing "at least 5 years before 1891." He said he began the work when he was 16 years old.—*New York Times*, May 22, 1960.

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fetus. Temperature 104°. Rapid pulse and breathing. Anorexia. *Diagnosis:* Metritis. *Treatment:* Two doses SULFABROM SOLUTION 700 cc. each. *Results:* Temperature 101.6° in 24 hours. Appetite returning". (3) "*Symptoms:* Foul hoof—limited to 'between the toes' variety with swelling. *Diagnosis:* Foot rot. *Treatment:* 700 cc. SULFABROM SOLUTION. *Results:* Eight of 11 animals walked normally in 48 hours with swelling reduced to normal or near normal. Three animals required second treatment and returned to normal in 48 hours".

These quoted reports are typical of those being received from clinical investigators and veterinarians. We believe they demonstrate that the *only* sulfas available to you *exclusively*—new SULFABROM SOLUTION and SULFABROM BOLUSES—are also the most effective you can use.

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French Veterinary Graduates Tour United States

Recent graduates of the National Veterinary College at Alfort, France, are making a two-month tour of the United States to study veterinary organizations, university life, and veterinary re-



search. Here they observe Drs. Nolen D. Connor (AUB '43) and Jack L. Davidson (OSU '33) of the Upjohn Veterinary Experiment Station near Kalamazoo, Mich., checking respiration and heart sounds of a dairy cow and recording clinical data. The group also toured the Upjohn Company's pharmaceutical research and production facilities. The college at Alfort is said to be the second oldest veterinary school in the world.

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REFERENCES: Teigland, M. B.: Proceedings of the 4th Annual Meeting, Amer. Assn. of Equine Pract., Chicago, Illinois, 1959. Witter, R. S.: Paper read at the Third Regional Conference on the Nitrofurans in Veterinary Medicine, Atlanta, Georgia, January 14, 1960.

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Wanted—veterinary clinician for pharmaceutical research department. General practice background preferred. Salary—open. Excellent benefits. Send resume to Norden Laboratories, Inc., Lincoln 1, Neb. Attn: Personnel Manager.

Wanted—assistant veterinarian for mixed practice, predominantly small animal, in Indiana. Salary, percentage and future. State age, qualifications, references and availability. Address Box K 16, JOURNAL of the AVMA.

Wanted—experienced veterinarian for small animal practice in Indiana. Good starting salary, pleasant living quarters. State experience and background. Address Box K 7, JOURNAL of the AVMA.

Wanted—veterinarian for mixed practice in Arizona. 70% large animal; dairy, feedlots and equine. Needed by November 15. Address Box K 5, JOURNAL of the AVMA.

Wanted—assistant for active modern small animal hospital on Long Island, near New York City. Good opportunity with excellent future. State qualifications. Address Box J 51, JOURNAL of the AVMA.

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Wanted—Positions

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Graduate (WSU '57), age 29, married, 3 years' experience in mixed practice, desires position in predominately large animal practice leading to partnership. Prefer location in Midwest or Western states. Address Box K 14, JOURNAL of the AVMA.

For Sale or Lease—Practices

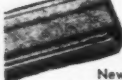
For sale or lease—Los Angeles area dog and cat hospital. Kirschner-type kennels. Excellent location; M 1 zone. Well-established, 2-man potential practice. Substantial down payment required. Outside interest. Box K 20, JOURNAL of the AVMA.

For sale—established clinic, kennel and residence. Increased family duties force retirement from full-time practice of woman veterinarian. Address Dr. Annelda Baetz, 2103 Kenilworth, San Antonio 9, Texas.

For sale—well-established mixed practice in Western Washington. Small animal hospital and large ranch-style home. Fully-equipped, including 2-way radio. Address Box J 60, JOURNAL of the AVMA.

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For sale or lease—fully-equipped small animal hospital and adjoining 3-bedroom house in lake town (15,000 to 20,000 population) 40 to 50 miles northwest of Chicago. Address Box K 15, JOURNAL of the AVMA.

For lease—small animal practice in Michigan. Excellent living quarters. Approximately \$25,000 gross. Prefer veterinarian with at least 2 years' small animal experience. State qualifications and personal background. Address Box K 11, JOURNAL of the AVMA.

Other interests is reason for selling mixed practice consisting of modern office building, drugs, 2-way radio. Located in Midwest. Low down payment and terms can be arranged. Address Box K 10, JOURNAL of the AVMA.

For sale—established small animal hospital located on north shore of Long Island. Average gross for past 5 years more than \$100,000. Strategic location in growing area. Fully-equipped for X-ray, surgery, laboratory work. Address Box K 8, JOURNAL of the AVMA.

For sale or lease—general practice in Wisconsin with or without real estate. Address Box K 2, JOURNAL of the AVMA.

For sale—Illinois mixed practice, established 9 years and still growing, 15% small animal. Will sell for value of real estate; drugs and equipment optional. Address Box K 1, JOURNAL of the AVMA.



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For sale—outstanding small animal hospital on San Francisco peninsula. Ideal 2-man practice, exclusive location, unlimited possibilities, completely equipped. Capacity—200. Substantial capital required. Address Box H 61, JOURNAL of the AVMA.

For sale—retirement and other interests are reasons for selling mixed practice, consisting of modern large and small animal hospitals. Located in Midwest. Suitable for 2 veterinarians. Sizable amount of cash required. Balance long term. Address Box H 52, JOURNAL of the AVMA.

For sale—practice grossing \$42,000 last year; mostly large animal. \$32,000 with half down. Includes building, drugs, equipment, kennels with outside runs, 2-way radio and laboratory. Western Iowa county seat town. Health and other interests reasons for selling. Do not inquire unless you have cash down payment. Address Box K 22, JOURNAL of the AVMA.

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1959 graduate desires hospital to lease or position leading to permanent association in small animal practice. Washington, D. C. or Cincinnati, Ohio, area. One year's experience in large AAHA practice. Excellent references if desired. Address Box K 6, JOURNAL of the AVMA.

Wanted—general practice in Central or Midwestern states. Give details in first letter, including price. Address Box K 9, JOURNAL of the AVMA.

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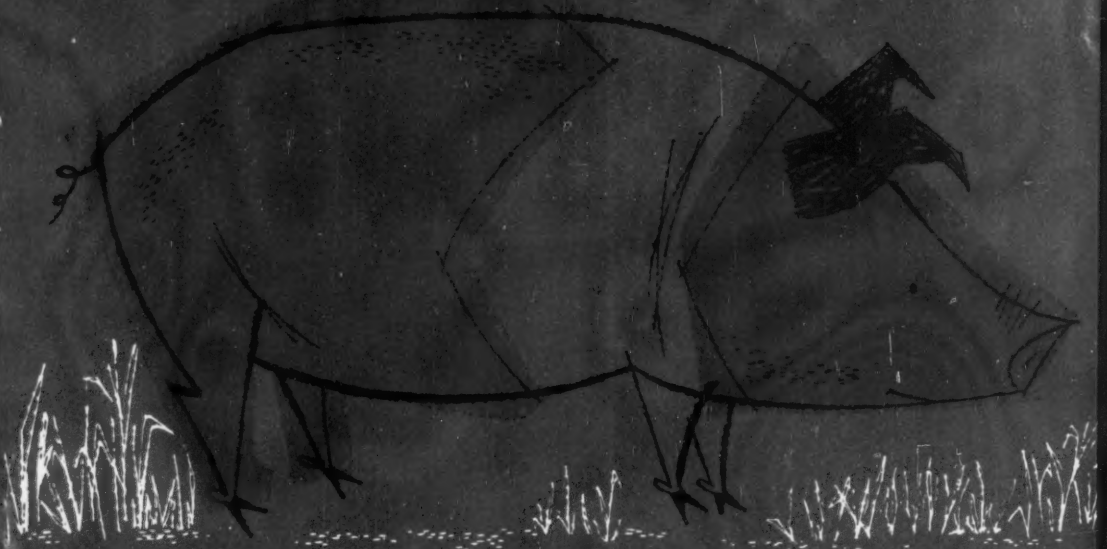
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